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(For List of Contents see pp. 191-2.)

CLINICS.

Clinical Lectures.

THE TRUE AND FALSE PALSIES OF HYSTERIA.

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(*Concluded from page* 71.)

THE form of hysterical disorders with which I propose to begin this brief lesson on the false palsies of hysteria, is one which I do not find any where described. It is the motor ataxia of hysteria. In the great study of hysteria which Briquet made, you will find that he speaks of a locomotor ataxia in hysteria; but he is careful to assign as its cause the loss of sensation extending to joint and muscle.

While clearly recognizing this as a cause of disordered movement, I am sure that it does not cover all the forms of motor ataxia to be met with in hysteria, and which may exist without any necessary relation to paralysis as their cause. The trouble I am about to speak of I find to be very common in hysteria—to coexist with many hysteric palsies or paretic states, and sometimes, though rarely, to be the prominent malady, with almost no loss of voluntary power.

The hysterical ataxic patient of this class, and I shall consider first the nearly pure case, has full feeling, or may have it, and is quite well able to use the limbs more or less freely while lying down. When she begins to sit up or kneel or stand the lack of co-ordinate muscular movements becomes at once visible.

Instantly the patient begins to fall to one side, a voluntary effort to redress the disturbed balance results in a partial fall to the other side or back or forward, as may chance. The patient *seems* to be unable to judge of the extent to which the balance is lost, and also to determine the amount of power needed to overcome the defect. The abruptness of these efforts at redressal of equilibrium appears to show an absence or defect of the usual antagonistic activity of opponent muscles. I am inclined to think that perhaps a large share of this difficulty may be due to a slowness in

volitional acts by reason of which the mandate reaches the muscle too late to be of ready service. This is by no means unlikely, for in many hystero-pareses I have measured and proved the retardation of nerve conduction. Slowness in learning the need to move a muscle and slowness in moving it would give rise to just such inco-ordinate action, as these cases exhibit. The lack of orderly movement is chiefly in the neck and trunk, less in the legs, and least in the arms. There is a variety of disturbed motion which at first sight looks precisely like this, but is different. In it the patient, although having marked paresis, and as in one case now under my care, distinct hemiplegia and hemianæsthesia when seated and held up, or even when the head alone is unsustained, shows the following symptoms: The head or body is pulled to one side. At the limit of this motion, or before that is reached, it is violently jerked over by the opponent muscles, as if their stretching were the signal for an explosive act of power. At once or in a moment the other muscles act in like fashion, and so the head or trunk is thrown about in a strange or disorderly manner so long as the patient remains upright. The same type of movement extends to the legs and arms. These acts are certainly of volitional birth, but they are so to speak convulsive renderings of natural acts, and are sometimes very violent.

In place of giving you types of motor ataxia with palsy I shall prefer to choose one now in my care, and which has the least share of palsy for the largest share of inco-ordination of the muscles.

Miss B., æt. 20, Kentucky, of healthy, living parents, in August, 1876, while going home from the Centennial Exhibition, caught a slight cold, out of which came complete loss of voice for seventeen months. In its return it came and went abruptly, and was well to-day and gone to-morrow. In September, 1871, at the Hot Springs, Arkansas, after a good deal of worry she is said to have had headache and dizziness, after which of a sudden she lost speech, and became unconscious, with her jaws firmly locked. The leg and arms moved in spasm, and when better had lost touch-sense, and did not feel pin pricks. This attack ended in weakness and fever, with cold feet and loss of power to swallow even saliva. After three weeks she regained speech, and then again relapsed. She was said to have had a typhoid fever, which does not seem likely.

About the fifth week she was found to have lost power in the legs. The loss is described as having been nearly entire, but by March, 1879, she had gained a good deal of motion. Since then she has been at a standstill.

In October I saw Miss B. in bed, a dark-skinned, rosy-looking girl without the least turn to tears or undue emotion. I should only have said that her manner was quick and excitable. She certainly had none of the usual furtive look, and small deceitfulnesses of a hysterical girl. Neither was there loss of tendon (patellar) reflex, and the sense of pain and touch and of heat was perfect.

While in bed Miss B. moved all her limbs somewhat slowly, but with a good deal of power; the lift of the leg was done in jerks as by distinct orders of will, but she showed none of the tremor and twitching of face and tearful look so common in hysteric girls called on for an unusual effort. When held up on her knees, she swayed to and fro, always falling if not assisted. When somewhat later she could stand up, the motor disorder showed still better. From head to foot every muscle used to preserve the upright posture was giving way momently and braced

again by distinct acts of will. The rocking motion so caused was curious to see. A slight push was sure to upset her, as if she was unable to provide in time enough of power to resist the shock and restore the disturbed balance. If I warned her of the coming shock, she did far better. The touch of a hand greatly aided her, and the closure of her eyes made things worse. Nor did Miss B., when standing, seem to have the least idea of her balance being in danger until the sway of her figure became extreme, when she caught herself up and with an effort regained her erect position only to fall to the other side. There seemed to be a lack of appreciation of the failing balance, and a slowness in re-dressing it when lost or in peril. When added to this we have complete loss of feeling, when skin, bone, joint, and muscle share alike in this respect, we have, of course, a still more complete want of power to preserve the upright posture, but this is the form of the trouble spoken of by Briquet and others, and I wished to make it clear that there were causes of motor ataxy which did not of need involve any lack of tactile sense. If in examples like Miss B. there be any loss of sensation, it must be that of the muscles—and of these alone; but, as I have shown, this need hardly be called upon in explanation, and tardiness of transmission of nerve messages may be enough to account for all that we see.

In Miss B.'s case little was needed beyond training the weak and inapt muscles, because she ate and digested well, slept soundly, and was free from pain.

My first step was to point out to her that, after she had made an effort which seemed extreme, another forth-putting of will would add to the previous result. This seems a simple thing to make clear; but, if you can convince your patient of the fact, it is of great service, because then you go on to point out further that, perhaps, by a series of trained and aided efforts, there may be won, bit by bit, a full power of motion. To lodge this idea in a woman's mind is at once to widen the horizon of hope. How much you gain by it depends a little on whether your patient is clever and wants to get well, or is silly and prefers the role of hysteria; but, after all, the whole mode of treatment rests on a study of character, or of character and hysteria, and a moral diagnosis is the first step to take.

With Miss B., at a standstill for months—bright, clever, longing for active life—the idea was as a wholesome ferment. The nurse now began to train her while in bed to move the legs, one at a time, very slowly, but in larger and larger movements, with intervals between of a minute or more.

An order is given to lift the leg; if it be too weak, a finger beneath the ankle aids it, but no attempt must be let to fail utterly; as she gets on, the orders are to be obeyed more quickly. It is easy to sketch out for one's self what such a system should be in its details. When it has gone far enough, the patient is seated in bed with some support to her spine, and is trained to move the head freely. When, in Miss B.'s case, she was put on the edge of the bed seated, the motor ataxia began to show, so that it took some time to overcome this trouble. The next step used with me to be the walk in some form, but of late I find it better to teach the girl to creep, which is an easy and natural mode of training for the walk. The patient has pads tied over her knees, and, lying flat on her face on the floor, without skirts, has around her a folded sheet. At an order, she tries to rise, helped by the lift of the sheet-belt held by the nurse. When

she is able to do this, and can gather her legs and arms so as to make of herself a quadruped, she is taught to balance herself, every effort being assisted, when needing help, by the nurse standing above her. The progress to creeping is easy; then comes the lesson of kneeling and pushing a chair; and last that of standing in a corner or by a chair. You see that, following nature's lessons with docile mind, we have treated the woman as nature treats an infant. For aid in walking we have three devices: the expensive wheel crutch, which can be easily imitated by a clever carpenter, being merely a framework with rollers so arranged that it includes crutch supports. Next, if need be, I use a device which may be common, for all I know, but which I have not seen elsewhere. It is a pair of crutches with a stout half hoop of metal between and in front of the two. This gives a solid support, and, in ataxic cases, is very useful as giving a sense of being secure, and therefore confidence. This crutch frame is soon replaced by a pair of supports, the base of which is about seven or eight inches long and two broad. It may be made like the lower half of a crutch, or have two columns of support set in the base, or it may be a single cane with a broad base; the top in any case should have a slight slope so as to lie easily in the line of the natural slope of the palm when resting on such a support. A rubber footing gives a little elasticity and a good hold on any form of flooring. With such a broad base of support, it is quite pleasant to find how soon the patient learns with its aid to balance herself. A third form of support which I devised two or three years ago is of use in hysteric or in any form of hemiplegia. If the left side be too feeble for the left arm to aid the left leg by a crutch, I resort to this arrangement. On the lame side a crutch having above a deep hollow to receive the armpit is fastened to the arm by two straps or a glove into which the hand is slipped. From the crutch a metal bar curves forward and towards the sound side, and ends in a handle which is grasped by the sound hand and carried forward by it.[1] I have found these supports most useful in many forms of weakness. In making them or having them made, pray remember that they be made light; most crutches are too heavy.

With regard to Miss B., I may add that she was cured in two months so as to walk unhelped anywhere, and that she is now free from pain and nervousness.

There yet remains to us hysteric paresis. Among the many disorders which hysteria affords, certain ones come clearly out from the tangle of named or nameless symptoms, and enable us to speak of them under some distinct name. It is a comfort, amidst so much that is confusing, to find these groupings of symptoms, and, in diseases of vague boundaries like neurasthenia and hysteria, a good deal of this useful sort of secondary classification is possible.

The history of hysteria is sometimes one of years, and in certain cases, either at the outset or after more or less of the strange drama of this disease has been played, the patient falls into a state of inertness of mind and body, which I am forced for lack of a better name to call hysteric paresis. It may be seen in union with other signs which are more clearly hysterical; but sometimes we find it almost pure from these disguises, as in the case of Miss L., from New Jersey, now in the Infirmary. A person of languid nature, not strong in mind or body, she began some years ago to be emotional, to have loss of appetite, weakness, tender spine, vertex headaches,

[1] All of these supports are made by Kolbé & Son, 1207 Arch Street.

etc. By and by she took to bed, and with more and more complaint of her back, and soon of soreness everywhere; ate less and less, gave no care to her bowels, and at last became feeble, sallow, wasted to the limit of wasting, and content to lie still most of the time, using mind and body as little as she could. From this state I rescued her and made her well, and now she is here again far worse than ever, unable to lift a limb or to turn over. She is twenty-two years old, and has not menstruated in six months. She is five feet five inches, and may weigh about eighty-eight pounds. Her skin is rough, dry, unpliant, yellowish, and seems to be firmly glued to the bones and muscles beneath it. Her morning temperature does not exceed 97.5° F.; her heart beats 90 to 120, and is quick and feeble. The organs seem healthy, and the secretions normal. She cries at times, but not much. Her face, marked with acne, is set, inert, wooden, as if she could not smile. The lids droop, the mouth hangs a little open, the voice is so feeble that it is hard to know what she says. The spine is very tender, and to touch it brings a gush of tears; but the left iliac fossa and the chest muscles are also tender. Her dislike to make any effort was great, but it was clear that no motion was lost, although all were wonderfully feeble. There was not during movement the jerky action of hystero-palsies, but an extreme and evident difficulty in motion, and a sudden failure to prolong it.

All the battery of toning influences was turned on this woman, and she is now gaining ground apace. She is fed often and in small amount, had for a time rectal feeding also—and the mechanical tonics, massage, and electricity. As usual in all such cases, we wait until the flesh is coming back, the colour brightens, and the muscles grow firmer under our mechanical stimulations before we call upon her to exert herself. Then, in this order, with passive motion—motion aided by a nurse, motion resisted by a nurse, active motion, unhelped—we shall train her back to a state of health. We shall cure her surely, but whether or not she will remain well I cannot say. It will depend on what kind of influences surround her, on what she is when well.

I have given here a short sketch of a state of paresis, in which with some anæmia or without a very marked condition of lack of blood all the functions are enfeebled, and this is most notable in those which involve muscular exertion of any kind. If there be also any pain such as that of spinal irritation made worse by motion, the patient is even more apt to be sluggish, and is not slow to avail herself of this and of every excuse to keep as quiet as possible. The real and singular want of power, as well to begin as to continue a motion, seems to set this apart from cases of mere neurasthenia while the general wasting and appearance of mal-nutrition serve yet more deeply to mark the distinction. The disorder I have described so briefly is one of those which adds many recruits to that large class which some one has called "bed cases," and which are above all things distinguished by their desire to remain at rest.

We have dealt so far with cases in which there was from some cause a real lack of power. We may share the common medical belief that some of them are within the chance of abrupt help by causes like the emotions which first gave rise to them, but for the most part they are not to be looked upon as of easy relief in this or in any way; in some members of the class of false palsies to which I shall now refer it is often possible to obtain ready and even sudden cures, and among them occur the cases which afford material for the skill of the so-called magnetizers, or for the modern miracle.

Russell Reynolds has described in a very able paper a number of cases in which some form of disorder appeared to have been brought about by dwelling upon a case of disease, the fixed idea being associated with some emotion. Now it has seemed to me that there is a state of mind and body, not rare in hysteria, in which there exists a so monstrous development of this strange power to create disorder by thinking of it that even a slight hint as it were will suffice to evoke a novel symptom. In this disease indeed we find women and men too passing into a mental state in which they are really much like people in dreams. Their power to reason on the phenomena of the senses leaves them, and what they conceive to be the case takes the place of that which is. These are they who are hurt by light or believe they are, who cannot bear noise or think they cannot, who feel vibrations as pain, who live muffled lives in dark rooms, and believe they cannot walk or even lift a hand or move the head. Such cases are looked upon as simulation of disease by some writers, and are I am sure prone to pass into that evil stage of hysteria, but others there are I also know who live lives of odd inhibition—slaves to the tyrant ideas which they themselves create.

This of course is to be met with to some extent in all grave hysteric cases, but it is also as I have said the ruling feature of a few. If you cause such hysteric women as these to believe that you can cure them you enlist on your side their own troops, for as you can create symptoms so can you also create absence of symptoms. There is in all this something like the so-called magnetizing of which we used to hear and see so much. Under a fixed belief people were made unable to move, or could not close the eyes, or could not open them, or were made to seem to have a pain by touching a point on the body. The patients I speak of are all very subject to like delusions. You put a finger firmly on the spine and ask if the patient have not now a pain in the left breast. She says no. You persist. At last she says yes—"Oh, yes, it hurts me!" Now, is this pure sham, or is it not? Does the presence of the set belief create pain? Is this like the pain of dreams, which seems real enough while we are in the state of dreaming? I have thought over all this a great deal. When we put a finger on the eye unopened for days and say now you can open it, and this is done, or when we arrest motion by an order we see a plain physical result which must have behind it a mental state out of which it grows, and so it seems to me that looking at the pain evoked by ideas or beliefs in the light we get from the motor phenomena, so evolved, we are hardly wise to stamp these pains as non-existent.

At the same time that I put forward this doubt as to the justice of the common view I am far from thinking that the hysteric girl of the class I am now discussing suffers as sharply as she seems to do, the emotions are no more in control than in a dream, and no pains are little, no burdens light. And now how to deal with these cases. Be sure you study them well before you act, because a first failure is apt to be fatal to success.

I have now in my care Miss C. from Chicago. When I first saw her she was in bed, which she quit but rarely and with difficulty. The room was kept dark, and she wore blue glasses over the closed eyes, and outside of all a bandage. She used cotton in her ears, and her nurse and parents crept about the room in list slippers. She had in all ten pillows, large and small, as supports around her, and was, as a young hysterical girl once told me "crowded with symptoms."

The character of this girl had always been that of a person thoughtful of

and for herself, and not free from esteem for her own mental powers, so that she had been able and also very willing by degrees to rule a meek household with that reckless despotism the throne of which is very often the couch of an invalid.

This case seemed to me one in which set beliefs, easily gotten and well nursed, had attained a power which gave rise to pain and over-sensitiveness and more or less inhibited movement. I began to deal with it by learning all I could from the girl herself to add to what I already knew of her mind, her morals, her habits, tastes, friends, education, and home life. Then the talk was let to settle on her eyes, and at last on the uses of light and the fact that its excess hurts even the healthy, but does not injure them. When at last she grew interested, and with herself for a text, that was easy, I said, perhaps a woman of strong character might learn to bear the light after long disuse of her eyes; that such a one could not get well readily in the dark, and that although the light would pain her, it most surely could not cause disease. I then left her with the idea that she could in a few days conquer her rebel eyes, and that it was absurd for a woman of intellect to let one organ disorder the whole body. The next day I found her with open eyes and sunlight in the room. One by one the ideas on which the case was built were thus artfully routed, and she is now after but a few days of treatment far on the road to health.

These victories are less easy with older women; but even then the mode of dealing with them is as much a question of the basis of character as of anything else. Sometimes we only need to dispel one symptom to overcome all; sometimes the return to health and healthy ideas exacts a long and tiresome struggle. Sometimes it is safe to assure the patient at the outset that they have but to believe and exert themselves in order to walk.

In this Infirmary, I saw some years ago an abrupt success obtained in this latter way in a woman fifteen years in bed, who was made able to walk well in three weeks, and I could easily add, were it needed, the details of many other and less striking cases. I had meant to say something here of that form of hysteria in which the patient deliberately acts a part, and with more or less cunning deceives those about her. I have seen a goodly number of these cases, but among them I have found quite rare the attempt to simulate palsy. It is easy enough to learn when a woman is pretending to pass calculi or vomit snake bones, but to know if her loss of power be real, or if she be suffering from an inhibitory idea or belief is more difficult. I may say, however, that purely simulated palsies in hysterical girls lack the qualities of hystero-palsies, are too complete, and show no loss of feeling. The best cases I can recall were in very young girls, and were present with much mental disturbance and after a long role of hysteric symptoms had been played with success. But already this lecture has reached a length quite too great, and I must put off to another time what I shall yet have to say on this interesting subject.

One subject which I have not ventured upon is that of diagnosis, nor can I linger upon it. I see every now and then, quite often in fact, cases of hystero-palsies which are sent to me as organic spinal diseases, while it is very rare to observe the opposite error. I think that these mistakes arise largely from mere want of accuracy in applying the diagnostic tests, and especially the electrical tests to be found in detail in all the great text-books. Next to this in importance is a failure to look sharply into the character of the early and præ-paralytic symptoms and the apparent causes of the disease.

I have said little as to the use of drugs in the treatment of the various forms of hysteric palsies or pseudo-palsies. I have said little because I believe that the numberless remedies for hysteria to be found in the books will be swept by another generation into the limbo provided for drugs with decayed reputations. I have no belief in the direct cure of hysteric losses of power by any drugs yet known to us; but in thus expressing myself I do not mean to say that no drugs have an indirect value. What you have to do is to rectify with care positive uterine troubles, to treat the anæmia so apt to exist in hysteria, to see that every function is well cared for, and, last not least, in ways I have pointed out, to learn what need there is to alter the moral surroundings of your patient, and then with kind and patient care, and an unbending will, to bring about the changes she may seem to require.

Do what you will—many of the cases I have so hastily sketched cannot be cured at home—isolate them, give them a new and well-trained nurse, take away, above all, the unwholesome round of home-petting or sympathy, deprive them of slaves made willing by unthinking love, and you may count on promptly curing many a case which you will utterly fail to aid under less hopeful circumstances.

CLINICAL LECTURE ILLUSTRATING ANTISEPTIC SURGERY.

Delivered in King's College Hospital.

By JOSEPH LISTER, F.R.S.,
Professor of Clinical Surgery in King's College.

Gentlemen: Here is a case which I wish to dress before you to-day—that of the woman from whose back I removed a large recurrent fibroid tumour twelve days ago. This tumour had first shown itself fifteen years since. It had been removed and recurred, removed again and recurred at intervals of three or four years, the woman each time foolishly allowing it to grow to large size before she sought the surgeon's aid. On the occasion of its fourth removal it was found adherent to the spinous processes of some of the dorsal vertebræ, which were accordingly scraped by the surgeon who performed the operation. When the patient again applied to him, with a large tumour in the same situation, he recommended her to my care. Finding the tumour of firm consistence, well defined, and freely movable, except about its middle, where it lay over the spine, and considering its very chronic course, I thought it right to give the poor woman another chance, and accordingly I removed the large mass, taking with it the skin that lay over the growth, about five inches in breadth, and all the scar of the previous operations, the incision being about a foot in length. Finding the tumour firmly adherent to the spinous processes of four of the dorsal vertebræ, I removed those processes in almost their entire length with cutting pliers, and also a considerable mass of spinal muscles in their vicinity, leaving a large hollow in the middle of the back. I was desirous that this deficiency should be closed in immediately if possible, and accordingly, by a plastic operation, I brought a large flap of skin inwards from the right side of the back, to cover it.

In adjusting the flap in its new position, I found great advantage in the use of the button-stitches of relaxation. I have for some time past used the lead buttons with a modification of form which makes them better for their purpose.

The plate is cut in the shape represented at A (Fig. 1), having two wings, which are turned up so as to be at an angle of about 45° with the rest of the plate; and round these wings the end of the wire is wound after passing through the

Fig. 1.

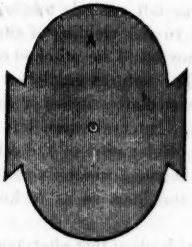
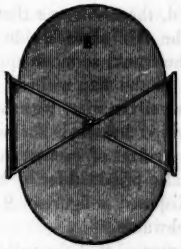
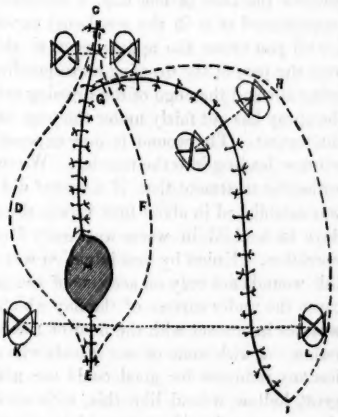


Fig. 2.



central perforation, as shown at B (Fig. 2). This is more readily done and undone than the winding of the wire round the plate as formerly, and at the same time the presence of the wire on the under surface of the plate is avoided, which by its pressure sometimes gave rise to a linear sore.[1] The buttons are represented in position in the accompanying wood-cut (Fig. 3), where the coarse dotted lines, C D E, C F E, represent the incisions made for removal of the tumour, the coarse dotted line, G H I, the incision which limited the flap of skin raised in the plastic operation, and the continuous lines show the ultimate arrangement after the flap was stitched in place, while the fine dotted lines indicate the subcutaneous parts of the silver wires connecting the several pairs of lead buttons.

Fig. 3.



I wish to direct special attention to the manner in which the lowest pairs of buttons, K L, are arranged, as I have found it very valuable in operations of this kind. While it is desirable, with a view to primary union, that the cutaneous margins should be everywhere approximated, it is of vital importance that the base of the flap, on which the supply of blood is in the first instance entirely dependent, should be protected from undue tension, or from pressure or traction by button or wire. With these objects in view the needle carrying the silver wire which was to connect the buttons was passed through the skin on the right-hand side considerably

[1] It is perhaps well that I should mention that this modification of the buttons was introduced before the publication of that suggested by Dr. O. Will, of Aberdeen, for a similar purpose (see *Brit. Med. Journ.*, June 21, 1879). The form described in the text will, I believe, be found at least as convenient as Dr. Will's, while it is more readily made, either by punching a lead plate, or cutting into the requisite shape with scissors.

distant from the edge of the wound, and, being brought out at the wound, was entered again beneath the skin at the left-hand edge, and made to emerge at a distance from the wound corresponding with that on the right side. The wire passed in this way did not engage the flap at all, but simply lay beneath it across the raw surface of the wound; and thus when the buttons K and L were pressed home and secured, the result was that while the flap was left entirely unaffected, the edges of the skin at each side of it were, thanks to the yielding of the integument of the trunk, so much approximated that they could be stitched closely to the edges of the flap without undue tension. The sutures employed were of pretty thick silver wire, with here and there intermediate stitches of carbolized silk or purified horsehair for accurate coaptation. Intervals were left at G and M for the orifices of caoutchouc drainage-tubes. Relaxation of the skin of the back was also provided for by having part of the bandage which fixed the gauze dressing disposed in figure-of-8 fashion about the shoulders so as to keep them drawn backwards.

It so happened that the patient had reactionary bleeding that afternoon, a very rare thing indeed with us, such as we do not generally see from year's end to year's end, but it did occur in this instance, probably from some muscular branch, and before the dressing was changed the patient had lost a good deal of blood. Tossing about in restlessness she moved her shoulders very much, and by these movements tore out some of the stitches. In this way there was produced a gap towards the base of our flap, a circular opening about two inches in diameter (represented at M in the wood-cut) exposing the interior of the hollow wound. I wish you to see the appearances at this stage of the case. I hold my hand over the part of the dressing corresponding to the wound, while the bandages are being cut and the edge of the dressing raised, and only take away my hand when the spray has got fairly under the edge of the dressing, and is over the region of the wound. The wound is now exposed before you, and you see the circular window leading into the interior. We used to say before the introduction of the antiseptic treatment that, if a wound did not unite by first intention, suppuration was established in about four days in the adult in cool weather, and in about three days in a child in warm weather. Here twelve days have elapsed since the operation. Union by first intention was impossible throughout a large extent of this wound, not only on account of the gaping opening of the skin, but also because the under surface of the flap which was drawn over the hollow in the back was not in contact with the floor of the cavity. Yet observe we have no suppuration. I wish some of our friends who doubt whether the antiseptic treatment has any influence for good could see a fact of this kind. Twelve days with a great hollow wound like this, with an opening leading freely into it, and the tissues exposed, and yet not a drop of pus! Now, as I did not hesitate to say that the result which you witnessed in the case of empyema (see *Medical News and Abstract*, Feb. 1880, p. 72) could not have been obtained without antiseptic treatment, so I venture with equal confidence to affirm that the merely serous discharge which you see upon this dressing could not have occurred without antiseptic treatment of some kind; not necessarily the kind of antiseptic treatment we use, but something really effectually answering the purpose of keeping putrefaction out. That the dressing here used has been thus effectual allow me to give you evidence. That dressing has been on the patient two days; you see the oiled silk "protective" perfectly free from the dark discolouration which it would acquire within such a period if putrefaction occurred, and you can ascertain for yourselves as I pass it round that it has no odour of putrefaction. The dressing, then, has been truly antiseptic; it has, as a matter of fact, prevented putrefaction. Observe now the entire absence of inflammation about this wound.

It has been so from the first. There is no inflammatory blush whatever, nor has there been from first to last. The day after the operation we saw that the upper part of this flap for about two inches in breadth presented a livid discolouration; looked as it were about to lose its vitality. I remarked to those of you who were present in the ward, that it did not follow that there would be any death of tissue, although I believe any practical surgeon who had seen the case then would have said that under ordinary treatment there must have been an extensive slough. I said I did not at all despair of this part, to a large extent at least, recovering itself; because, even supposing any portion of tissue has lost its vitality through defective circulation, and suppose that piece of tissue so dead does not putrefy, it does no harm to its neighbours from the mere fact of its being dead, any more than the dead intestinal tissue of the catgut with which we tie our arteries. Catgut is absorbed by the living tissues round about, and so may other dead tissues be absorbed and not in the least offend their living neighbours; whereas, on the other hand, if it does putrefy, the dead piece, being putrescent, becomes a source not only of irritation, but of caustic action to the parts immediately adjacent. For if one portion of tissue has lost its vitality through interference with the circulation, you may be quite sure in the immediate vicinity other parts will be weakened in their vital power from the same cause, just as in the case of senile gangrene, where we know the liability of gangrenous inflammation to spread. But here you see that the once livid patch has to a large extent recovered itself. It remained discoloured for several days, but we found on firm pressure with the tip of the finger that the colour could be dispelled, and it slowly reappeared when the pressure was removed, showing that the blood was still fluid in the vessels, whereas, if the tissues had been dead, the blood would have been coagulated. There now remains only a little piece of the extreme margin of the flap, an inch and a half long and about half an inch broad, which is not obviously alive. This little bit has actually lost its vitality, but here it remains after these twelve days still firmly attached to neighbouring parts, the stitches which connect it with the living skin still holding. It has induced no suppuration, nor excited the faintest inflammatory blush in the surrounding skin. There is not even an absolutely defined line of demarcation. That, again, gentlemen, would have been an impossibility without effective antiseptic treatment. But with such treatment it is a possibility, for I have seen it in larger sloughs than this, that this piece of dead tissue may be absorbed and never separate at all.

One other point about this wound is worthy of your attention. This window, that we see leading into the cavity, was at one time considerably bigger than it is now. It became encrusted at its borders by exuding liquor sanguinis, which, coagulating, formed a solid ring within it, and this exudation of liquor sanguinis has gone on, producing a broader and broader ring. The parts first formed, remaining free from putrefaction, have undergone organization, including vascularization, and the newly-formed vessels have continued to pour out plasma. And now, if we turn up the superficial layer of the coagulum at its outer margin, we see disclosed a ring of cicatrix. That is to say, the organization of the ring of coagulum has assumed the character of epidermic formation in the vicinity of the pre-existing epidermis of the cutaneous margin. And this process of cicatrization has been going on without the production of any pus, and even without the formation of any true granulations. I never happened to see anything exactly corresponding before. But this is, doubtless, simply because I never before had the opportunity of studying a window like this in a piece of skin stretched over a cavity. For we have here only a peculiar instance of what we are familiar with under antiseptic treatment, the organization of blood-clot and cicatrization proceeding under the superficial layer of the coagulum without the occurrence of

suppuration or true granulation. It is by virtue of the same process of progressive exudation and organization of plasma that the cavity of the wound is being constantly reduced. We see, on looking through the window, that the floor of the cavity is not so far below it as it was; the hollow is becoming constantly shallower. Now, all this, gentlemen, presents what must seem to those who have not witnessed it a marvellous and incredible contrast with the old mode of healing by granulation and suppuration, which must infallibly have occurred without antiseptic treatment.

I now reapply the dressing. The protective, dipped in the 1 to 40 watery solution to destroy the septic property of any dust adhering to it, is applied over the healing wound. Immediately over this is placed a piece of the carbolic gauze, dipped also in the lotion, to insure that it is actively antiseptic when applied, for the dry gauze cannot be trusted in this respect, and over this the regular gauze dressing of ample dimensions. Remember the immense importance of having the protective overlapped well on all sides by the gauze. The protective, having nothing antiseptic in its composition, must be overlapped just as if it were itself a wound.

The bandage is so arranged as to brace the arms somewhat back, though that is not now so necessary as it was in the first instance. Here again, from the liability of the chest to movement, we use the elastic bandage—one piece round the shoulders and another round the waist—to keep the edges of the dressing constantly applied to the skin.

The attainment of the results which you have seen in this case depends not only on the efficacy of the antiseptic measures used, but also upon the use of an efficient protective, as we term it—that is to say, a layer of material employed to protect the healing part from the irritation of the antiseptic itself. And with reference to this point, I may mention that we have now a considerably better protective than we had some time ago. It still consists essentially of oiled silk, varnished on both sides with copal varnish. The copal varnish is the principal agent in this protective for keeping the carbolic acid out; it is much less permeable to carbolic acid than oiled silk is, although oiled silk itself is much less permeable to the acid than gutta-percha or caoutchouc is. The copal varnish, then, is the most important of the ingredients of which this protective is composed. Some time ago one of the manufacturers who supplied this protective, for reasons best known to himself, omitted the use of the copal varnish altogether, and supplied us with what was evidently mere oiled silk varnished with dextrine (which is put on outside the copal to insure that the material shall take an antiseptic film when dipped in carbolic lotion). We were supplied then with mere oiled silk brushed over with dextrine, and this is a comparatively ineffective protective. On the other hand, that which we now use is coated on both sides with specially thick copal varnish, and this makes it correspondingly effective. I understand that some persons object to this protective as being too thick and substantial. These gentlemen little know what a mistake they make in thus objecting to it. When it comes to be of the temperature of the body, it becomes perfectly soft and pliable; it applies itself beautifully to the part, so that there is no objection to it on that score. If we had not used a pretty effectual protective, we should not have had the kind of results you have seen in this case. If we had had a carbolic acid dressing acting directly on the tissues of that exposed wound we should have had before now granulation and suppuration—suppuration occasioned by the irritation of the antiseptic—"antiseptic suppuration," as I have termed it; and if we had had the gauze dressing directly applied to that piece of dead tissue, it would have been impregnated with the pungent antiseptic, and would have become chemically stimulating on the same principle, though in

a less degree, as if it had been putrid; it would have stimulated its living neighbours and urged them to granulation and suppuration, and we should have had a piece of dead tissue already separated by antiseptic suppuration.

Again, if we had not used a pretty efficient protective, we should not have seen the blood-clot organized and cicatrizing without suppuration at the edge of the window in the skin. We should have seen it with a granulating and suppurating margin. I am induced to speak on this point because I believe the protective is often as yet imperfectly understood. A very eminent surgeon was round my wards some months ago, and he told me he had never seen the organizing blood-clot. I took him to two cases in which it was occurring. He was a man of scientific precision, and he at once said, "These cases are enough for me; I know from this time that an exposed blood-clot may become organized." How was it he had never seen it, for he had practised antiseptic treatment with great efficiency for years? The truth was, as he told me, he had not thought the carbolic acid partjcularly irritating, and he had never used any protective at all, and therefore had never seen an organizing blood-clot. I had sent to me some time ago, by a very distinguished Russian surgeon, this beautiful looking article—this transparent film,—which he told me he now always used in preference to our protective—a most lovely thing, certainly enough to charm us to use it by its mere beauty. But I found it would not stand the test which will enable you always to ascertain the quality of a protective. I took a piece of it, and put upon the middle of it a little bit of lint soaked with 1 to 20 carbolic acid lotion, and left it awhile; in the course of about half an hour, on applying the tip of my tongue to the other side, I perceived the pungent sensation caused by carbolic acid, showing that it had already gone through it; whereas, with a piece of this properly made protective, treated in the same way, you would find, after the lapse of three or four hours, absolutely no trace of the acid. Therefore, although this so-called protective is very pretty, it is scarcely a protective at all in the sense in which we use the term. It will keep the wound moist, and thus prevent the dressing from sticking to it, but that is nearly all it will do.

But worse remains to be told of this elegant article. The chemist who sent me the samples informed me that it contained thymol and salicylic acid in its composition; in other words, it was not only inefficient as a protective against the antiseptic, but it was actively antiseptic in its own substance. And he added, it could be made up with carbolic acid; showing that he had no idea whatever of the object for which we use the protective. It has been said sometimes that our dressings irritate wounds. The wound you have just seen is an instance to the contrary. It is not irritated; it is healing kindly, and not only so, but it shows very much less marks of irritation than you could get with any ordinary treatment that has been devised. But if surgeons use the antiseptic agent, whatever it be, in such a way as to act directly on the tissues, they will necessarily have their wounds more or less irritated according to the nature of the antiseptic they employ.

But, useful as a protective is in promoting the best kind of healing under an antiseptic dressing, I desire to say, by way of warning, that it would be infinitely better to use no protective at all than to employ it amiss; for, though at the risk of seeming tedious, I must repeat that in proportion to the efficiency of the protective in excluding the irritation of the antiseptic, is its power to exclude also its antiseptic virtue, and thus to conduct putrefaction inwards to the wound, unless it be overlapped well on every side by the really antiseptic element of the dressing.

[In preparing this lecture for the press I may add that, on examining the wound yesterday (Dec. 9th), I found that the still serous discharge had become so slight that my house-surgeons had allowed four days to pass without changing the dress-

ing. The buttons had been removed several days before, yet the cutaneous margins remained everywhere in contact, except that a gaping of about three-quarters of an inch had occurred at the lower part of the window, M, after the removal of the buttons, K and L, which especially supported that part. But though the window had been from this cause temporarily increased in dimensions, it had since been reduced to less than its former size by the same mode of healing that it had before presented, and, while suppuration was still absent, the border of cicatrix had considerably increased in breadth. The window was occupied by a gray pultaceous mass of lymph, which was the nearest approach to suppuration that had been seen throughout the case. I clipped away about one-eighth of an inch of this gray substance with scissors, when blood oozed from the incision, showing that vascularization had occurred almost to the surface. The process of healing by successive exudation and organization of plasma, which I think has never before been distinctly described, but which this case has so beautifully illustrated, had entirely closed the great cavity of the wound. And the new tissue thus developed having, like new tissues generally, a tendency to shrink as it grew older and more perfect, the skin of the flap covering the cavity—which in the first instance was stretched straight across from scapula to scapula, had been drawn down somewhat into the hollow, so as to present a concave appearance, while the part felt firm and solid under the finger.

At the same time my anticipations of possible absorption of the slough without suppuration had been already partially justified. Whether the slough originally involved the whole thickness of the cutis or not, I have no means of knowing. Certain it is that the stitches which attached the edge of the flap at the site of the slough still retained their hold, and the border of the mass of dead tissue thus kept in contact with the healthy living skin had undergone a process of organization—that is to say, of substitution of living tissue elements for the dead which they absorbed—exactly similar to that which had occurred at the border of the window in the skin. And thus, without the slightest trace of suppuration and without the occurrence of granulation, a cicatrix about one-sixth of an inch in breadth had come to occupy the place of the upper border of the slough.]—*Lancet*, Dec. 20, 1879.

Hospital Notes.

Dislocation of the Upper End of the Radius Backwards.

Albert P——, aged fourteen years, a factory boy, applied to Mr. RIVINGTON at the London Hospital on Oct. 21st. He stated that whilst running he had fallen on his right arm, which was twisted (pronated) at the time, and that the back of the hand and elbow came in contact with the ground. He positively affirmed that prior to the accident there was nothing the matter with his elbow.

On examination a marked prominence was seen at the back of the joint below the external condyle and by the side of the olecranon process, evidently consisting of the displaced head of the radius. Flexion and extension were almost unimpaired; pronation and supination could be performed by the surgeon, but not to the full extent; supination especially was diminished, and the patient could not affect it himself to the same extent as the manipulator; there was no crepitus or other evidence of fracture, the head of the radius rolling freely under the finger during examination; there was a bruise over the head. A persevering attempt to reduce the bone was made under chloroform by Mr. Clark, the house-surgeon, without result. The patient was taken into the house, and later in the

day was taken up to the theatre for Mr. Rivington to examine. As the lad adhered to his statement that the displacement had not existed before the accident, chloroform was again administered and extension made in various positions, with pronation, supination, and pressure on the head of the bone, for about ten minutes, but in vain. He was sent to bed, and evaporating lotion was applied. No swelling or increase of heat followed, and on the following Monday he was again examined under chloroform, being seen also by Mr. Hutchinson and Mr. Tay, who noticing some thickening in front of the head, suggested that perhaps a portion of the articular end of the humerus had been detached and prevented reduction. The following day the mother of the boy was interrogated, and it then transpired, as had been suspected, that the displacement was not recent, having occurred at least five months previously in a scuffle which the lad had had with an enraged landlady, during which he was violently shaken by the forearms, and fell striking his right elbow against the leg of a table. He told his mother his arm was broken, and after the subsidence of the ensuing swelling, the lump at the back of the arm was noticed, and it had been there ever since.

Remarks by Mr. RIVINGTON.—There are several points of interest in this case, the chief being the amount of mobility of the joint possessed by the patient before leaving the hospital. He could flex the elbow fully, and extend it almost as completely as on the sound side. Although occasionally rotating the humerus when asked to turn his hand over, he could, when the humerus was confined, pronate well, and supinate to rather more than half the natural extent. The positive assurance of the patient that the displacement had not existed previously led me to speculate on the causes of the impossibility of reduction, and it occurred to me that possibly the head of the radius might have slipped out of the orbicular ligament, instead of tearing it away from the margins of the lesser sigmoid cavity, or that the peculiar shape of the head was the obstacle, having slipped perhaps, through a rent in the ligamentous or aponeurotic structures at the back of the elbow-joint, and become fixed more or less, like the head of a stud in a buttonhole. The notable absence of swelling and increased heat, and the remarkable mobility, so suggestive of an old injury, led me to make further inquiry and prevented me from bringing the case forward as one of recent injury in which reduction could not be effected. The statements of patients are seldom to be implicitly trusted, possibly those of juveniles should be altogether disregarded without confirmatory testimony. The mother and patient have been advised in case of any future bruise to inform the surgeon that the displacement is an old one, and obviate the possibility of any future attempt at reduction. It would be interesting to learn some years hence whether the mobility remains. In the only two dissections known to me, the head of the radius has contracted fresh connections. In the specimen in St. George's Hospital Museum the new attachments formed by the ends of the orbicular ligament with the humerus prevented pronation and supination. It is probable that the articular ends of displaced bones are particularly liable to undergo changes similar to those seen in chronic rheumatic arthritis, and fresh bone sometimes forms in their neighbourhood. Hamilton states that Dr. Markoe believes that this dislocation, which is a rare one, never occurs as an uncomplicated accident. Certainly there was no sufficient evidence of any fracture of either condyle of the humerus or of the articular surface of the humerus in this case, whatever might be the suspicion from the thickening observable. The head of the radius was displaced more directly backwards than is usual according to the descriptions of books, not lying in anywise behind the external condyle, but a little overlapping the articular end of the humerus. It appeared to be placed outside the oblique outer margin of the anconeus muscle.—*Lancet*, Dec. 27, 1879.

Empyema treated by Free Incisions with Antiseptic Precautions.

George H., aged 4; admitted into King's College Hospital, under the care of Dr. PLAYFAIR, Oct. 16, 1879, with albuminuria (one-third); no history of scarlatina, and no lung symptoms. On Oct. 20, slight rigor, temperature running up from 97° to 103.6°, and at about the same date dulness over the left base first noticed. On Oct. 25, dulness more marked; left side measures an inch more than the right; feeble entrance of air over whole left side; heart displaced to the right of median line; temperature zigzag. On Nov. 1, breathing feeble and jerky; 54 per minute; pulse 144 per minute; great distress. Ordinary small trochar and canula introduced below the fifth rib, but no fluid escaped. On Nov. 2, breathing and general distress more marked. Aspirated at 9.30 P. M. about 3 to 4 ozs. of healthy pus, drawn off with immediate relief, temperature dropping from 102.6° to 98.2°, and the breathing from 48 to 36 per minute.

On Nov. 5, as the distress was still very great, and there was every evidence of fluid still remaining in the pleural cavity, it was decided to operate. At 2.30 P. M., Prof. Lister made an incision about one inch long connecting the two previous punctures. The usual antiseptic precautions were observed, and an ordinary drainage-tube introduced. During the operation between 6 to 8 ozs. of sanguineous fluid escaped, and a quantity of fibrous deposit was felt between the two layers of pleura both above and below the opening. Since operation the acute symptoms have gradually subsided, and with the exception of a short rise from the 11th to the 17th, which was probably due to the kidney mischief, the temperature has been comparatively normal. There has been but little discharge from the wound, which is now dressed antiseptically about every fourth day. About fourteen days after the operation a short silver tube with a shield was substituted for the India-rubber drainage-tube, as being less irritating and cleaner. The breath sounds can now (Dec. 22) be heard perfectly all over the left side of the chest; the heart has gradually returned to its proper position; and, in fact, the child may be said to be practically convalescent.

Remarks by Dr. PLAYFAIR.—This case is peculiarly interesting as affording an excellent example of the application of the strict antiseptic method to the treatment of empyema in children. He had long been convinced that the great desideratum in the management of such cases was some plan by which continuous drainage could be obtained without the admission of air into the pleural cavity. In the fourteenth volume of the *Obstetrical Transactions*, in a paper "On the Treatment of Empyema in Children," he had published a series of cases in which he had attempted to do this by a system of continuous sub-aqueous drainage, one end of the drainage-tube being in the pleural cavity, the other in a vessel of water under the bed. The results were on the whole good, but the practical difficulties in the way of carrying out the process were considerable; and, in several of the cases, it was found impossible to prevent the entrance of air by the side of the tube. He had felt convinced that the antiseptic system, which admitted of the pleural cavity being laid freely open, without the risk of the exhausting effects of long-continued purulent discharge, afforded the best hope of a satisfactory result. This case, which was the first in which he had had the opportunity of carrying it out, remarkably corroborated this expectation. In itself it was an unfavourable case, on account of its severity and the co-existence of renal complications. In spite of these drawbacks the result was most satisfactory. From the moment of the operation the child began to improve. There was next to no purulent discharge and the lung rapidly expanded. The fact that the dressings required to be changed only every third or fourth day much simplified the management of the case, and he felt convinced that the antiseptic method afforded a marked advance in the means at our disposal for the treatment of this most severe and troublesome class of disease.—*Obstet. Journ. of Great Britain*, Jan. 15, 1880.

MONTHLY ABSTRACT.

Anatomy and Physiology.

On the Hymen.

Dr. BUDIN (*Annales de Gynecologie*, Nov. 1879) has made several dissections of the vagina and vulva in virgins, and has found that the hymen is in reality constituted by the anterior extremity of the vaginal canal. The vagina may be regarded as the finger of a glove presenting at its anterior extremity a circular orifice. This circular perforated extremity of the finger of the glove comes forward and insinuates itself between the labia minora, where it juts out and forms what is called the hymen. The dissection showing this has been repeatedly made by Dr. Budin, and always with the same result. When the dissection is carried out completely, he is able to remove the uterus and the whole of the vagina; and with the removal of the vagina, which is easily separated from the surrounding structures, the hymen is found to have completely disappeared.

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Absorption by Granulations.

The idea that granulations are good absorbing surfaces is one which few at the present day would be disposed to entertain. For it has been generally supposed that, as soon as a wound had granulated, the patient was free from any further danger of absorption of noxious materials; and those cases in which symptoms of blood-poisoning supervened after this period were supposed to have received the poison before granulation was complete. And yet, several facts have been for some time known which demonstrate that some substances at least may be introduced into the circulation in this way. Thus Bonnet, in 1852 (*Gazette Médicale de Paris*), confirmed the observations previously made as to the absorption of strychnine by granulating wounds; and he further pointed out that the same was the case with iodine, more especially when applied in the form of an ointment.

The paper just published on this subject by Dr. HACK (*Deutsche Zeitschrift für Chirurgie*) furnishes many new facts of the greatest interest and importance. He was led to his investigation by the following circumstance. A patient was admitted, under the care of Professor Maas of Freiburg, with a very large prostatic abscess, which had burst into the rectum. This was followed by pyæmic abscesses in various parts of the body; the patient soon became extremely weak, and it was found impossible to administer food or stimulants by the mouth. Under these circumstances, Professor Maas determined to introduce stimulants into the abscess cavities, in the hope that they might be absorbed. Camphor-wine was accordingly, from time to time, injected into several of the abscesses; and, a few minutes after each injection, the marked improvement in the pulse showed that absorption had to some extent taken place. In a few days the patient regained his appetite, and was ultimately completely restored.

The chief questions which Dr. Hack has attempted to answer are: What is the absorptive power of granulating wounds at different periods, as compared with that of freshly cut surfaces? Does the form in which the substance is applied, or the manner in which the wound has been treated, affect the result? A large piece of skin having been removed from the back of a dog, a suitable

dressing was applied; and in four days, granulation being then complete, this wound was tested as to its absorbing power. Two classes of substances were used, viz., such as could be found in the urine—as ferrocyanide of potassium, salicylic acid, sulph-indigotate of soda; and such as showed their presence by the production of constitutional effects—as pilocarpin and apomorphia. Applied in the form of solution to a sore four days old, treated with water-dressing, the ferrocyanide appeared in the urine in seventeen to twenty minutes; while the same substance, applied in solution to a freshly cut surface, was detected in fifteen minutes. When used, however, in the form of ointment, it was absorbed much more rapidly; and this was still more marked when the salt was sprinkled over the wound in the form of a powder. A similar result was obtained when pilocarpin was employed, the ointment and powder producing constitutional effects more quickly than when applied in the same quantity to a freshly cut surface of the same size. Apomorphia was absorbed from wounds thus treated only during the twelve hours immediately after their infliction. As the wounds became older, it was found that, though the first traces of absorption of the ferrocyanide could still be detected about the same period as in those four days old, yet no marked precipitate could be obtained in the urine till some minutes later. That this diminution in the quantity absorbed in a given time depended on the smaller extent of absorbing surface, and not on any alteration in the granulations, was shown by comparing old wounds with portions of more recent wounds of the same size. Chloride of zinc, applied in an 8 per cent. solution, at once arrested absorption by the granulations. This was also very much diminished by the use of alcohol. Sloughs, caused by the application of strong carbolic acid, absorbed with extreme readiness. Glycerine also aided absorption. Where the wounds were treated antiseptically, very remarkable results were obtained. Granulating wounds thus treated absorbed both more rapidly and in larger amount than even freshly cut surfaces; and substances such as apomorphia, which could not be taken up by wounds treated by water-dressing, produced their physiological effects with great rapidity in this instance. Even after the removal of these dressings, about two days elapsed before the granulations assumed the characters of those treated from the first with water-dressing.

The importance of these facts cannot well be overrated; and it is to be hoped that, attention being thus directed to this subject, more exhaustive investigations will soon be forthcoming. More especially is it necessary to repeat these experiments with putrid substances; for, if it be the fact that granulating wounds, treated antiseptically, can absorb putrid materials more readily than freshly cut surfaces, the practice which some adopt of only treating such cases as compound fractures antiseptically till granulation is established, and of then applying septic dressings, must be dangerous. Dr. Hack, indeed, states that he has observed that erysipelas is especially apt to attack granulating wounds which have been treated antiseptically, if the antiseptic dressings be left off while these wounds are still of large size.—*British Med. Journal*, January 3, 1880.

Materia Medica and Therapeutics.

Preparation and Use of Albuminate of Iron.

Dr. W. DONITZ, of Tokio, Japan, in the *Berlin. Klin. Wochenscrift*, 1879, No. 36, says that the Japanese are peculiarly liable to anæmia, induced by gastric and intestinal catarrh. In searching for a proper form of iron for adminis-

tration in his numerous cases, he has hit upon the albuminate, which is made up as follows. The whites of one or two eggs are beaten up with about five ounces of water, while six drops of solution of chloride of iron of the German Pharmacopœia are dissolved in an ounce of water in another vessel. The iron solution is then added gradually to the albumen, the mixture being continuously and vigorously stirred meanwhile. At first the mixture is cloudy, but by thorough stirring it becomes almost or quite clear. The cautious addition of a few drops of hydrochloric acid clears up the solution, but this is hardly necessary if the stirring process has been well carried on. When the solution is cloudy or contains clots of albumen, it may easily be filtered. The filtered fluid is brought up to six ounces, so that a tablespoonful will contain one-half drop of the iron solution. For convenience of dispensing the albuminate of iron, it may be dried into thin scales and powdered, since it is easier to dissolve this powder in water than to prepare a fresh supply of the moist albuminate. Dr. Donitz has employed this preparation for the past two years with great satisfaction. It can be given in cases where the stomach is so weak that no other preparation of iron is tolerated. The dose is a tablespoonful thrice daily. Hypodermically, Dr. Donitz has given the preparation in doses of one-eighth of a grain or more in an ordinary syringeful of solution, of which one-half was injected in one locality and the other half in another at one time. No abscesses followed.—*London Med. Record*, Jan. 15, 1880.

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On the Transfusion of Blood by Injection into the Peritoneal Cavity

In an address delivered on the 25th July before the Silesian Society "für Vaterländische Cultur" (*Medicinisch-Chirurgische Rundschau*, page 876, 1879), PONFICK gave a very promising report of the results which he had achieved by the simple method of transfusing defibrinated blood into the peritoneal cavity. After briefly reviewing the history of ordinary methods of transfusion, their complication, and the rarely favourable results which followed, he related that in the course of researches which he had been making, for some years, with his pupil Dr. Corda, upon dogs, he had injected into their peritoneal cavity normal as well as defibrinated blood. A very remarkable difference showed itself in favour of the defibrinated blood, which not only excited very little or hardly perceptible local irritation, but also was found to have disappeared very quickly from the peritoneal cavity, and to have been absorbed into the general circulation. Encouraged by the favourable result of experiments on animals, he recently undertook this kind of transfusion in three patients in hospital. In these cases also the result was favourable in that the slight feverishness and the little tenderness of the abdomen which followed the operation, very quickly passed away.

The apparatus with which the transfusion is made is extremely simple. It consists of an India-rubber tube, to one end of which is connected a piece of glass tubing, and to the other a sharp pen-pointed canula, which can be closed by a tap. After the whole of the tube is filled with defibrinated blood, the point of the canula is pushed through the abdominal wall, the tap is opened, and the defibrinated blood is poured, to the required quantity, through into the peritoneal cavity. Such a proceeding causes no distress to the giver of the blood, and causes to the patient discomfort hardly worth naming, or indeed no pain at all. It unites, therefore, great quickness with ample precision as to the quantity of the transfused blood. Above all, it is free from danger to the heart, lungs, or brain; and, further, within the course of the first day a considerable effort may be counted on, which is greatly increased by a second transfusion. In reply to questions, Dr. Ponfick stated that more blood can be infused this way into the body than in any other. Thus, in his first case, he had transformed 240 grammes, in his second

350, in his third 220, without having reached, in his opinion, the maximum quantity. In answer to a question from Dr. Spiegelberg, whether an injection into the peritoneal cavity is really equivalent to transfusion, or is only to be considered as a mode of nutrition due to the destruction of the blood infused, and its use as a nutritive fluid, Ponfick replied that neither in any of his patients, nor in any of the animals of research, was hæmaglobinuria observed, whereas a very limited amount of destruction of blood-corpuscles very soon shows itself in the urine.

Since the reading of Ponfick's paper, BIZZOZERO and GOLGI have undertaken a research which they publish as an original contribution in the *Centralblatt für Medicin. Wissenschaft*, Dec. 20, No. 51, in which they fully confirm by examination of the quantity of hæmaglobin in the circulating blood, the results of Ponfick. Their conclusions are these. The blood-corpuscles injected into the peritoneal cavity do really penetrate into the circulating blood-mass; for, so soon as twenty minutes after the injection, they found in the circulating blood a considerable increase of the percentage of blood-corpuscles. The maximum of this increase they found took place on the first or second day. This increase of hæmaglobin had a direct relation to the quantity of blood injected within certain limits. The most considerable increase in hæmaglobin which they observed, did not exceed fifty-seven per cent. of the original quantity of hæmaglobin in the circulating blood. The increase of hæmaglobin caused by the injection lasted more than a week. In one animal, which they kept for twenty-seven days, there was still a slight increase of percentage of hæmaglobin to be observed. After the maximal point of increase obtained, however, at the end of the first forty-eight hours, a progressive diminution of this decrease followed, although the quantity still remained greater than before. The increase of hæmaglobin was obtained in sound animals as well as in those which had been made anæmic by bleeding. But the maximum of hæmaglobin appeared much more quickly in the latter than in the sound animals. Altogether, their researches speak strongly in favour of peritoneal transfusion of blood, since it is further noticed that in no case was the operation accompanied by any noteworthy disturbance of the health of the animal.—*London Med. Record*, Jan. 15, 1880.

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Cold Clysters.

J. LAPIN (*St. Petersburg Med. Wochenschr.*, 1879, No. 22) has continued the investigations of Folty, Ruthenberg, Boyer, and Schlykowa, upon the antipyretic action of cold clysters. The experiments were made upon patients suffering from fever, upon those who had no fever, and upon those who were healthy. The temperature was taken in the axilla whilst the patient lay on his back, as well as in the rectum and in the hypogastric region. The clyster of one litre of water at 5° or 10° C. was then administered, and the temperature was again noted after the water had been ejected. From this method of experiment the following results were obtained: (1) The cold clyster is an active agent in lowering the temperature, its results being tolerably persistent. (2) Clysters of 10° C. were in every case well borne by the patients, and sometimes left behind them an agreeable sense of invigoration extending over the whole body, though in other cases they induced unpleasant sensations in the abdomen. In patients suffering from recurrent fever they even produced shivering. (3) The diminution in the temperature which occurs after the administration of cold clysters is greater in feverish patients than in those who are free from fever or who are healthy. (4) Cold clysters not only lower the temperature, but also affect the pulse and respiration to a considerable extent. (5) The most marked diminution is noticed in the

rectum and then in the hypogastric region, whilst the least fall is in the temperature of the axilla. (6) Defecation follows the use of cold clysters at variable times in different persons. (7) It is certain that the cold is preferable to the warm clyster in all cases in which an enema is merely required for the purpose of emptying the bowels in non-febrile patients. This is especially the case when it is desirable that these intestines should exercise a tonic action after the evacuation, or that it should be followed by a diminished supply of blood to the pelvic organs. (8) The advantage of the cold clyster over more energetic antipyretic means, such as quinine, alcohol, sodium, salycilate, and other tonics, consists apart from its simple application in the fact that it fulfils other indications besides that of lowering the temperature. (*a*) It removes the stagnation of masses of feces, which are so frequently met with in feverish patients; (*b*) It contributes to the removal of gases, and diminishes meteorism; (*c*) By these means it causes the diaphragm to move with greater freedom, and enables the organism to remove the sources of its self-poisoning by means of the intestinal gases, a poisoning which must occur if only to a small extent at each stoppage in the movement of the feces onwards; (*d*) Cold clysters consequently lessen to a certain extent the afflux of blood from the intestine to the neighbouring organs, such as the uterus and urinary bladder.—*Practitioner*, Jan. 1880.

Medicine.

On Morbid Local Temperatures.

In relation to Prof. Peter's communication to the Académie de Médecine on Morbid Local Temperatures (*Medical News and Abstract*, February, 1880, page 95), Prof. BROCA, at the meeting of the Academy on December 30, related the researches which he had been engaged in on the subject. His communication is published in full in the *Bulletin* of that date, but is too long for insertion otherwise than by abstract.

Prof. Broca, after referring to the observations made long since by Forster, Hodgson, Demarquay, and others, on the influence of ligation of vessels on the temperature of the limbs, adverted to his own thermometrical observations both in individuals the subjects of spontaneous obliteration of the arteries of the lower extremity, and in those the subjects of embolism of these vessels. He has ascertained that the application of the thermometer enables us to distinguish simple localized embolus from the obliteration of the arterial system of the limb—a point of great importance in surgical practice, since, in the former case, when the obliteration is localized, we may by amputation cure the patient of the gangrene caused by this partial obliteration; while in the other case an operation would be useless, as it would be followed by gangrene of the wound. In embolism, then, thermometrical investigations have established that the temperature is increased at the level of the lesion, while it is at first diminished in the parts situated below this, but is afterwards re-established on the re-establishment of the collateral circulation. But if in place of embolism there is obliteration throughout the extent of the arterial system of the limb, the depression of temperature caused by the suppression of the circulation persists in consequence of the impossibility of the collateral circulation being established. If a thermometer is applied under these circumstances the temperature is found to keep diminishing from the root to the extremity of the limb. Prof. Broca states that on sev-

eral occasions he has been able to determine, by means of the thermometer, whether the gangrene of a limb has been due to an embolic obliteration or to a general obliteration, and to employ the indication thus furnished in determining the propriety of surgical intervention.

His researches concerning the temperature of limbs after ligature and obliteration of arteries led M. Broca to an investigation of cerebral temperature, which he commenced in 1865 while engaged in his researches for the determination of the convolution of language. The employment of the thermometer enabled him to establish the diagnosis of acute and chronic *ramollissement*, and to determine on which side the cerebral lesion existed. For these researches he fixed around the head of the subjects submitted to his observation a crown of thermometers so disposed as to lead to as little loss as possible of heat by radiation. By his experiments made on individuals in a physiological condition—*internes*, *externes*, *infirmiers*, etc.—he ascertained that during cerebral work an increase of temperature is observable opposite the frontal lobe, while opposite to the temporal and occipital lobes no change is observable. Among the applications of thermometry in cerebral pathology, M. Broca first adverts to the observations which he has made on persons the subjects of old torticollis. Under the influence of this lesion they undergo an atrophy of the face and of the cranium, which exhibits a deformity analogous to that which has been described in the pelvis by Naegele, and termed by him the oblique oval pelvis. The temperature is diminished from four to six-tenths of a degree on the side on which the deviation exists; and although this difference is very slight, and at a given moment insignificant, it exerts in the long run a considerable influence on the nutrition and development of the cranium and brain. No cerebral disease exists; but the conditions of the circulation are not the same, the obstacle to the passage of the blood being greater, owing to the increased inflexion of the carotid at its entrance into the cranium on that side.

But a much more important application, in a practical point of view, is that which consists in the diagnosis of cerebral embolism. This lesion has almost always its seat in the Sylvian or middle cerebral artery, and the temperature is indicated in the temporal region—a diminished temperature therefore being observable when this artery is obliterated. In this way Sylvian embolism is distinguishable from congestive or inflammatory cerebral or meningeal affections, which, like it, may affect the faculty of language. But partial atrophies and chronic *ramollissements*, followed by absorption of the cerebral cortex, which is replaced by a collection of serosity, may also give rise to a diminution of temporal temperature, and this has to be distinguished from that arising from embolism. Here is shown the analogy which exists between Sylvian embolism and femoral embolism. When the Sylvian region ceases to receive blood by its artery, blood is brought to it by the collateral channels, that is to say, by the vessels furnished by the pia mater, the branches of the anterior cerebral artery, and those of the posterior cerebral. These branches and the vascular networks which emanate from them become, therefore, the seat of an exaggerated circulation; and we then find that the occipital thermometer, and especially the frontal thermometer of the bad side, exhibit a higher temperature than those on the healthy side. This elevation of temperature, coinciding with the depression of the temporal temperature, characterizes Sylvian embolism—just as the elevation of the temperature of the knee, coinciding with the depression of the temperature of the foot and the leg, characterizes the obliteration of the lower part of the femoral.

Diagnoses of this kind are interesting in themselves, as they are also for prognosis, without any clear therapeutical indications being deducible from them; but

there are also cases in which thermometrical exploration of the brain may render great service to the surgeon. It is acknowledged at the present day that simple depression of the cranium should not be treated by trephining, the injured persons recovering better without resorting to it, and their recovery generally proving definite. But it is also known that certain individuals who have survived these injuries may, at the expiration of some months, some years, or even many years, become epileptic and present signs of chronic meningitis or encephalitis, which are reasonably attributed to the irritating action of bony fragments thrust in towards the cavity of the cranium. Under these circumstances many surgeons have had recourse to the trephine, and many successful results of such interference are on record. Still, this is an operation not lightly to be resorted to; and a man who has suffered from a depression of the skull is not thereby assured from ordinary cerebral affections; and the question arises, when cerebral symptoms appear a certain time after fracture with depression, whether they are or are not the consequence of the depression. This important diagnosis may be assisted by the study of cerebral temperatures. If there be an excess of heat at the level of the old seat of injury, we may admit that this is the seat of the cerebral irritation. But if the temperature here is normal, while a maximum of elevation is exhibited at some other point, we are led to an opposite conclusion, and trephining, indicated in the former case, is here inadmissible.

Prof. Broca agrees with Prof. Peter that the ordinary medical thermometer is the one best suited for these investigations. The scale of the one which he employs, however, extends from 17° + C. to + 43° C.; and the results are only obtained after a long application. To overcome this inconvenience, he had at first the idea of employing thermo-electrical instruments; but, having consulted MM. Froment and Foucault on the subject, they advised his employing the mercurial thermometer. It is this also that M. Béclard employs in his researches on muscular heat. Seguin's thermometer is not calculated for these investigations, as it does not admit of being attached to the part investigated; which, owing to the time required for ascertaining the temperature of the deeper parts, is necessary.—*Med. Times and Gazette*, Jan. 17, 1880.

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Sir William Jenner on the Treatment of Typhoid Fever.

(*Concluded from page* 90.)

In hemorrhage from the bowel in typhoid fever the blood comes from the floors of the ulcers; the most copious hemorrhages occur at the time of the separation of the sloughs; by the separating of the slough a vessel of some size may be opened. Under such circumstances the hemorrhage is very copious, and the patient may even die on the chamber utensil. Much more frequently the blood, although considerable in quantity, escapes from minute vessels on the floor of the ulcers. I have never known it escape from the mucous membrane, though I have from the hemorrhoidal veins. Although in the majority of cases the bleeding is arrested by nature, the blood lost relieving the vascular fulness of the part, still reliance should not be placed on this natural cure.

When blood in ever so small a quantity is observed in the stools, the patient is to be kept in the recumbent position. He should not be allowed to make any effort, and on no consideration to sit on close-pan or raise himself or be raised by others to pass urine, etc. If the patient is unable to pass urine when in the recumbent position, the urine should be drawn off by catheter. All movement of the bowels should be restrained as far as possible and for as long as possible. An ounce of starch-water with ten or fifteen drops of laudanum may be given at once as enema, and then a dose of acetate of lead every two or three hours by the

month, with three to five drops of laudanum, or fifteen grains of gallic acid in a wineglass of iced water every two or three hours with the laudanum. I think I have seen benefit from small doses of turpentine. It is a point of the greatest moment to keep the bowels empty, and therefore nourishment should be given in the most concentrated and absorbable form—*e. g.*, essence of meat in tablespoonful doses frequently repeated. All nourishment which leaves solid residue—*e. g.*, milk—should be avoided. Lumps of ice should be sucked, and all essence of meat, etc., be iced. When the loss of blood is sudden and copious, or is frequently repeated, the subcutaneous injection of ergotine may be employed, and an ice-bag applied over the region of the ileum. The faintness due to considerable sudden bleeding from the bowel should not be removed by stimulants unless it immediately threatens life.

Perforation of the coats of the intestine by the extension of the ulcer in depth, and finally by sloughing of the peritoneum is, so far as my certain experience goes, always fatal. I have recorded one case in which this lesion was supposed to have occurred, and to have been repaired, but the patient dying some weeks after of erysipelas of the head and face, I found the perforation was not of the intestine, but of the peritoneum over a softened mesenteric gland. If adhesion occur over the perforated spot of intestine, my experience accords with that of Rokitansky—namely, that such adhesions are never permanent—*i. e.*, permanent enough to permit the recovery of the patient. To give the patient a chance of recovery, absolute rest in the recumbent position must be maintained, and opium be given in quantity sufficient to stop all action of the bowel, and to subdue pain if pain be present. For pain, although in some cases most severe, is altogether absent in others, and this although the patient is perfectly sensible—not only conscious enough to feel pain, but able to tell those about him all he does feel. As any adhesions that form are so easily broken down, inaction of the bowels must be maintained for as long as possible.

Tenderness of the abdomen is not limited to inflammation of the peritoneum from perforation of the intestine; there is often inflammatory vascularity of the peritoneum corresponding to the floors of the ulcers in the intestine, and even lymph may be found thickening the membrane or fixing it to adjacent parts. When death from other conditions has occurred, I have not infrequently found this local preservative lesion to have been attended by very considerable tenderness of the abdomen. A like degree of tenderness arises from local peritonitis over the enlarged mesenteric glands, and also from the mesenteric glands themselves being inflamed from the absorption of irritating matter from the intestinal coats or contents. Warmth and moisture afford relief in the majority of cases, but if the temperature be high, and the tenderness superficial, an ice-bag to the part may be more beneficial, and more grateful to the patient. But the chief indication is to keep the tender part at rest, and to correct the fetor of the stools.

Tenderness in the left hypochondriac region, due to the state of the spleen, is not uncommon in typhoid fever. Enlargement of the spleen is one of the symptoms of most, perhaps of all the acute specific diseases; tenderness of the organ is only occasionally present. It is during the third week of typhoid fever that tenderness of the spleen usually reaches its maximum. When the tenderness is considerable it is a symptom of grave import; the tenderness is not due to local peritonitis, but to the condition of the proper substance of the spleen. For the relief of the state of the spleen indicated by tenderness, although a symptom of great significance in prognosis, I know no remedy of much importance; the application of warmth and moisture over the organ has sometimes seemed to be of service.

From the commencement of typhoid fever the temperature of the patient is

elevated. This elevation of temperature is the direct result of excess in destruction of all the tissues of the body. The patient loses weight, and continues to lose weight so long as he is the subject of the fever, so that Zimmerman, fixed the duration of typhoid fever by ascertaining how long after the onset of the disease the patient ceased to lose weight. In local inflammation the temperature of the inflamed part is greatly in excess of the temperature of the body generally. In uncomplicated typhoid fever the elevation of temperature is practically uniform in all parts of the body. Local inflammation, blood-infection, and nerve-disturbance, are common causes of great increase of the temperature above that *proper* to any given case of typhoid fever—*i. e.*, due to the action of the fever poison on the system generally. Thus inflammation of the mesenteric glands is frequently excited by fetid or acrid matters conveyed to them by the lymphatics from the raw and inflamed intestine, and blood-infection may owe its origin to the same cause. Congestive nephritis and pneumonia are common lesions in typhoid fever, and are common causes of increase of temperature. The power of the nervous system to raise the temperature, or to produce sudden changes which raise the temperature, in typhoid fever, is well illustrated by the sudden rise which frequently follows mental emotion. I have known the temperature start from this cause from 102° to 106°. In the progress of typhoid fever local inflammations cause more or less permanent elevation of temperature; blood-infection rapid, and sometimes temporary, always varying, elevations of temperature; nerve-disturbances rapid and often transient elevations of temperature.

The treatment of typhoid fever by cold baths, when the temperature reaches 104°, or even less, is very generally adopted in Germany; but neither my own limited experience nor the evidence adduced by others in its favour has carried conviction to my mind of its advantage. At the same time I entertain no doubt that the direct cooling of the body is in some cases essential to the preservation of the life of the patient—gives him, so to say, his only chance of recovery; while in others it alleviates the severity of a symptom which increases the danger of the patient.

A certain degree of elevation of the body is incompatible with the favourable progress of the case. Thus a temperature of 106°, rising to 107°, and still advancing, will, unless lowered by treatment, speedily end the life of the patient; for these fortunately very rare cases the direct and rapid depression of the patient's temperature by the cold bath is essential—is the only source of hope. Again, a temperature of 105°, if continuous for forty-eight hours, or broken only by a slight fall of short duration, may itself, by the degenerative changes it favours or produces in the heart and other organs, cause the fatal termination; for these cases a tepid bath gradually cooled down is sufficient to bring down the temperature; the bath has to be repeated as the temperature rises. Persons at an age when degenerative changes of tissue naturally occur suffer more from continued high temperature than do younger persons. If the disease be advanced, the skin dry, the patient prostrate, and the internal organs congested, especially the kidneys, a tepid or warm pack is often followed by marked improvement in temperature and in the other symptoms. When the temperature is for some time 103½° to 104½°, and even higher, cold effectually applied to the head (*e. g.*, by the India-rubber tubing cap) will often suffice for its reduction—reduction, that is to say, not only of the temperature of the head, but of the body generally; when the temperature falls the cap should be removed, but be reapplied as often as it rises again. Tepid sponging will reduce the temperature a little, and soothe and quiet the patient if he be restless and sleepless.

Thus limiting the employment of direct means of lowering temperature, I have seen none of the ill effects which are said occasionally to follow its vigorous

use—viz., collapse and failure of the heart's power; while I have seen what has appeared to me to be indisputable good follow its employment.

Other means are used to reduce temperature. When the high temperature is conjoined with rapid feeble heart's beat, when the patient is advanced in years, or when the extremities feel cold, though the temperature of the body generally is high, a fall of temperature frequently follows the administration of alcohol. Quinine, in occasional large doses or in smaller doses repeated at intervals, has been followed by reduction of the temperature in typhoid fever. Salicylate of soda is also said to have a like effect. When judging of the effects of these and other drugs for reducing temperature, one must not lose sight of the fact that sudden fall of temperature when no drug is given is of not unfrequent occurrence, and also that the temperature varies daily. This natural fall of temperature I have seen attributed to the drug. I must say that I have been disappointed in the effects of the two drugs I have named as reducers of temperature, while I have seen both occasionally do much harm by disturbing the stomach and interfering with digestion. In a disease which runs a limited course, like typhoid fever, the greatest possible care should be taken to preserve the powers of the stomach, as the life of the patient may depend on his power to digest nourishment towards the end of the disease.

Typhoid fever cannot be cured by perspiration, but the patient suffers much less discomfort and is less restless when the skin is gently moist. The most certain means for producing gentle perspiration I know is the application of a large warm and moist flannel covered with oil silk over abdomen and chest, and the administration of warm bland fluids. In the later stages of the disease, profuse and most exhausting perspiration sometimes occurs. The perspiration is kept up and greatly increased by the heat of the patient's body and the moisture of the perspiration itself. To prevent chill, the nurse carefully covers the patient; thus, with a relaxed skin disposed to sweat, he is kept, so to say, in a prolonged vapour bath. I have seen lives lost from the asthenia thus produced. To restrain this profuse perspiration, the patient's skin should be dried with a warm napkin every few minutes if necessary, and dry clothes placed between the wet linen and the skin. Alcohol should be given at the same time to stimulate the nervous system and increase the force of the heart's action. Sponging with tepid vinegar and water is sometimes of much service.

The state of the heart, as indicated by the frequency of its beats and the strength of its impulse, has always been considered of the greatest significance in determining the treatment to be pursued at any moment in a case of typhoid fever. As a rule, the weaker, the more frequent are the heart's beats. This feebleness and rapidity in excess of that proper to the fever may be due—(1) To changes in the muscular tissue of the heart: *e. g.*, softening with granular degeneration passing into fatty metamorphosis of the muscular fibres. No doubt the occurrence of these changes is favoured by long-continued high temperature of the blood. (2) To the circulation of poisoned blood through the vessels of the walls of the heart; the poison being produced in the system under the influence of the fever, or of its effects. (3) To nerve influence.

Feebleness of the heart's action due to either of these conditions may cause the death of the patient directly by asthenia or indirectly by enfeebled *vis a tergo* producing local congestions. Although the two first-named causes of cardiac weakness are the most serious and the least affected by treatment, the third is the most common, and very frequently greatly exaggerates the effects of the other two.

To avert death from failure of heart power, alcohol is the great remedy. Over defective cardiac action, due altogether to changes in the muscular tissue, when once established, or to the circulation of poisoned blood through its vessels, alcohol

exerts comparatively little influence; but when the weakness and frequency of cardiac action are due to nerve influence in part or altogether, then alcohol exerts a singularly beneficial effect on the rapidity and feebleness of the heart's action.

When the patient is, from natural temperament and the effect of the fever poison, in a state of nervous trepidation, or either directly from the mental state or from some appreciable accidental circumstance giving a colour to his hallucinations or his dreams, in a state of fright; a little abdominal pain or disturbance will cause him to start from sleep or awake in fear. Under these circumstances the temperature rapidly rises—I have known it mount to 106°—the pulse becomes extremely frequent, 150 or more, and feeble or irregular. The effect is so great in the patient's state that death has, I believe from cases I have seen, not unfrequently happened. A free use of stimulants removes all the gravest symptoms, the temperature falls, and the heart's action becomes steady; it falls in frequency and increases in power.

Mental disturbance in typhoid fever varies from trifling wandering—from which the patient is readily recalled by directing his attention to some common object or by requesting him to perform some simple act—to the most violent delirium. Delirium due to fever is never conjoined with headache; headache in typhoid fever may be most intense, delirium most violent, but the headache ceases before the delirium begins. If the delirious patient complains spontaneously of headache, then we should doubt the accuracy of our diagnosis; or if that is beyond question, then we must conclude that there is present that infinitely rare complication of typhoid fever, intracranial inflammation. Delirium is, as a rule, one of the symptoms which are influenced for good by alcohol, but it is one in which the effects of the alcohol should be most closely watched. When alcohol is contra-indicated or proves useless or injurious, the head should be shaved and cold applied either by an ordinary ice-bag or by the cold water tubing cap, or the head may be kept cold while the force of the heart's action is maintained by alcohol.

There is one nerve symptom to which I attach great and grave significance, and which is a guide to treatment—it is tremor.

Tremor is sometimes so great that the patient is unable to protrude his tongue; his jaw trembles, and his voice quivers; and if he attempts to hold any vessel, he spills its contents, not from weakness or drowsiness, but from shaking of the hands. Tremor out of all proportion to other signs of nervous prostration is evidence of *deep* destruction of the intestine. A small *deep* slough will be accompanied by great tremor; a large extent of superficial ulceration may be unattended by symptoms. Now it is deep ulcers following separation of deep sloughs which are especially liable to give rise to severe hemorrhage and perforation. In these cases of tremor alcohol should always be given to increase nerve energy, and so to limit the sloughing and ulceration to what is the direct consequence of the specific process.

I may sum up my experience in regard to the use of alcohol in the treatment of typhoid fever thus. Its influence is exerted primarily on the nervous system, and through it on the several organs and processes; for example, the heart and the general nutritive processes—changes on which the rise and fall of temperature depend. In judiciously selected cases it lowers temperature, increases the force and diminishes the frequency of the heart's beats; it calms and soothes the patient, diminishes the tremor, it quiets delirium, and induces sleep. It should never be given in the early stage of the disease, or with the hope of anticipating and so preventing the occurrence of prostration and debility, but should be prescribed only when the severity of special symptoms, or the general state of prostration, indicates its use. Hence a large number of cases of typhoid fever end

favourably without alcohol being prescribed from the beginning to the termination. It should not be prescribed when a sudden gush of blood has induced faintness, unless the faintness is so great as to threaten life immediately. Nor should it be given when, after the first few doses, the temperature rises, the heart's action becomes more frequent or more feeble, delirium increases, sleeplessness supervenes, or drowsiness deepens, so as to threaten to pass into coma. When the urine contains a considerable quantity of albumen, alcohol should not be prescribed, unless absolutely necessary for the relief of some symptom immediately threatening life, and then it should be given with the greatest caution, and its effects on temperature, the circulation, and on the urinary and other secretions, both as to quantity and quality, be carefully and frequently noted. The quantity of alcohol prescribed should be as much only as may be necessary to effect the object for which it is prescribed. In the fourth week, to tide the patient over the concluding days of the disease, it may, as a rule, be given more freely than in the second or the beginning of the third week of the disease, but it is in exceptional cases only that more than twelve ounces of brandy in the twenty-four hours can be taken without inducing some of the worst symptoms of prostration. Nearly all the good effects of alcohol, when its use is indicated, are obtained by four, six, or eight ounces of brandy in twenty-four hours. Taken in excess—even when in smaller quantities it would do the patient good—it dries the tongue, muddles the mind, or induces delirium or drowsiness approaching to coma, and diminishes the action of the secreting organs, on the healthy action of which the elimination of the materials destroyed by the action of the fever poison depends. For the last thirty years I have made it the rule of my practice in the treatment of typhoid fever to abstain from giving alcohol if, in the case before me, I *doubted* the wisdom of giving it; when in doubt I do not give alcohol in typhoid fever, and when there is a question in my mind of a larger or smaller dose I, as a rule, prescribe the smaller. The reverse of the rule I laid down for myself in the treatment of typhus fever.'

In conclusion I will briefly sum up the chief points that my experience has taught me in regard of the treatment of typhoid fever:—

Typhoid fever cannot be cured; but more lives may be saved by the judicious treatment, and more lives lost by the improper treatment of typhoid fever, than of any other acute disease.

For a very large proportion of cases no other treatment is really required from beginning to end than rest in bed, quietude, fresh air, pure water, and regulated diet, although most cases are benefited by a little wine in the third and fourth weeks. If medicinal, in addition to hygienic, treatment is required, it is because special symptoms by their severity tend directly or indirectly to give an unfavourable course to the disease. At the same time, it must be remembered that the gravity of some symptom is in certain cases due to lesions of structure beyond the possibility of successful treatment—*e. g.*, primary deep sloughs of Peyer's patches; and that other grave symptoms pass away spontaneously, although no special treatment is prescribed for their relief. When drugs *are* required to hold in check a special symptom, their use should be discontinued when the gravity of the symptom for which they are prescribed has subsided.

Temperature so high and continuous as to be a cause of danger, either directly or indirectly by favouring serious degenerative changes of structure, is present in exceptional cases only, and for such cases alone is the direct application of cold to the general surface required.

Alcohol, by the influence it exerts on the nervous system, is of the greatest value in the treatment of typhoid fever, but it should only be given for the purpose of attaining a definite object; its effects should be watched, and the dose so

regulated as to attain the desired effect from as small a quantity as possible. As the treatment in reference to many symptoms is in the present state of our pathological knowledge tentative, it may have to be varied frequently both as regards continuance and dose of drugs, of stimulants, and of cold. My experience has impressed on me the conviction that that man will be the most successful in treating typhoid fever who watches its progress, not only with the most skilled and intelligent, but also with the most constant care, and gives *unceasing attention to little things*, and who, when prescribing an active remedy, weighs with the greatest accuracy the good intended to be effected against the evil the prescription may inflict, and then, if the possible evil be death, and the probable good short of the saving of life, holds his hands.

While admitting without reserve that heroic measures, fearlessly but judiciously employed, will save life when less potent means are useless, the physician whose experience reaches over many years will, on looking back, discover that year by year he has seen fewer cases requiring heroic remedies, and more cases in which the unaided powers of nature alone suffice for effecting cure; that year by year he has learned to regard with greater diffidence his own powers, and to trust with greater confidence in those of nature.—*Lancet*, Nov. 15, 1879.

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The Significance of Absent Patellar Tendon Reflex.

Dr. C. H. HUGHES, from a clinical inquiry into the significance of absent patellar tendon reflex (*Alienist and Neurologist*, Jan. 1880), concludes that, while absent patellar tendon reflex is often of significance as an associated symptom of present locomotor ataxia, and may even serve, when unassociated, to excite suspicion of its approach, we are not justified in regarding it, when it is the only phenomenon observable, as a certain *sign;* or when it is absent and the other symptoms are present, in excluding a diagnosis of posterior sclerosis. It cannot have the diagnostic significance claimed for it, when it may be observed in indubitably healthy states of the cord, and when the reverse condition of exaggerated excitability may undoubtedly be found in cases of unquestionable posterior spinal sclerosis.

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Chemical Composition of Bones in the Joint-Affections of Locomotor Ataxia.

M. REGNARD has been studying the chemical composition of bones which have undergone those striking changes of degeneration (Académie de Médecine, *Gazette Hebdomadaire*, December 27, 1879) which M. Charcot has pointed out, and of which he has preserved remarkable specimens in his museum at La Salpêtrière. These researches were made on a femoral bone, of which the two extremities were absolutely absorbed and worn away. It was reduced to powder and dried. One hundred grammes of this bone contained of mineral matters, 24.20 grammes; of organic matters, 75.80 grammes; total, 100 grammes. The organic matters were divided thus: fat, 37.70 grammes; osseine, 38.10 grammes; total, 75.80 grammes. The various mineral matters were in the following proportions: phosphate of lime, 10.9 grammes; phosphate of magnesia, 7 decigrammes; carbonate of lime, 11.8 grammes; chlorides, etc., 8 decigrammes; total, 24.20 grammes. The first fact which strikes one is the abundance of fat, 37 per cent., of which the normal bone deprived of its marrow contains very little; then the enormous diminution of phosphate of lime, 11 in place of 48 per cent. The osseine, the carbonates, and the chlorides remain normal. There is, then, more than dry arthritis in the case of these ataxic patients. There exists a real trophic lesion of the bones; a fatty degeneration, with disappearance of the mineral matters. And this confirms the opinion maintained on that point by

Professor Charcot, to whom is due in the first instance our knowledge of this class of disease.—*London Med. Record*, Jan. 15, 1880.

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Locomotor Ataxy in its Relations with Traumatisms.

M. Landouzy, in a *résumé* of M. PETIT'S paper on this subject in the *Revue Mensuelle de Médecine et de Chirurgie*, Mars, 1879, thus sums up his conclusions (*Revue des Sciences Médicales*, Oct. 1879). Traumatisms having direct or indirect influence on the spine, such as falls on the back, the seat, and the feet, bring on concussions of the medulla, and, consequently, lesions which may become the point of departure of a chronic myelitis, and give rise to symptoms of locomotor ataxy. Up to the present time, it cannot be affirmed that distant wounds possess the same pathogenic influence; but it is probable that, in subjects predisposed to general sclerosis, as arthritic, syphilitic, and alcoholic patients, they may, by over-exciting the medulla, hasten the development of the ataxy. It is certain that distant wounds may revive an apparently cured ataxy, and accelerate the progress of a coexistent ataxy. Various morbid phenomena, the suppression of habitual transpirations, hemorrhoids, menses, cutaneous eruptions, cold, metrorrhagia, pregnancy, intercurrent febrile affections, appear to have a similar action to distant wounds. Ataxic manifestations may localize themselves in regions or organs affected either before or after the appearance of the ataxy. In certain cases, prolonged peripheral irritations have brought on nervous phenomena which have been wrongly designated ataxy by some writers. Appropriate treatment has removed the irritation, and the nervous phenomena have disappeared. As locomotor ataxy is often accompanied by disturbances in the nutrition of certain tissues, it is easy to understand that it may modify the local evolution of wounds. This is to some extent proved by certain cases of contusions of joints, fractures, and wounds of the soft parts.—*London Med. Record*, Jan. 15, 1880.

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On a Peculiar Form of Spinal Disease in Workmen in Zinc Foundries.

The workmen in the zinc foundries of Upper Silesia suffer from obstinate catarrh and irritation of the lung, as well as intestinal canal, and, after a long time, general cachexia, due to the introduction of zinc vapours or zinc oxide into the organs of respiration and digestion. One peculiar series of symptoms, until now undescribed, appears, however, to SCHLOCHOW (*Deutsche Med. Wochenschr.*, 1879, Nos. 17 and 18) especially to deserve attention. These occur in workmen who have been occupied in the foundries from ten to twelve years. At first, complaints are heard of pains in the back, sensitiveness in the soles of the feet, a feeling of burning and creeping in the lower limbs, and gradual not rapid or overwhelming pains occurring in the legs. These patients become deaf and rough-skinned, and complain of cold; the sense of touch and perception of pain disappear in particular parts of the lower half of the body, but in an irregular fashion, so that there is often excessive sensibility in the back of the foot and the shin-bone, whilst the walls of the abdomen and genital parts have lost sensibility. Reflex irritability is diminished in the skin, as well as in the tendons. There are no disorders of the functions of the bladder and rectum. Although at the beginning the muscular power remains, the gait is hasty and irregular. The patients walk with the legs far apart, and tread with the whole sole of the foot. They falter when the eyes are shut, and they go badly in the twilight, so that it is evident that a diminution of the muscular sense occurs. During movement, there occur also often muscular tremors in the muscles of the thigh and of the buttock. There is, however, no atrophy of the muscles, nor any loss of electrical excita-

bility. It is only in advanced stages that the motor power is diminished in the upper as well as in the lower extremities. Schlochow enters elaborately into the differential diagnosis, and arrives at the conclusion that there is in these affections a focus of chronic inflammation in the spinal cord; and that the symptoms depend upon this, and probably also upon the deposit of zinc in the muscle-substance. Tabes, lead-poisoning, cadmium-poisoning, rheumatic and catarrhal influences, are eliminated from the causation of this disease. There remains, therefore, only as the apparent cause the introduction of zinc into the organism. The prophylactic method is the improvement of the ventilation and means for removing the zinc vapour.—*London Med. Record*, Jan. 15, 1880.

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Hemorrhages in Whooping-Cough.

At a recent meeting of the Paris Académie de Médecine (*La France Médicale*), M. HENRI ROGER read a paper on this subject. He treated successively of epistaxis which is produced in a direct way by the convulsive efforts of coughing, and only becomes dangerous occasionally by its abundance and repetition when it is connected with blood-poisoning; of subconjunctival and palpebral ecchymoses, equally dependent on the fits of coughing, which are a good indication of pyrexia, and sometimes serve to distinguish the cough of whooping-cough from common bronchitis; of otorrhagia, purpura, and certain visceral hemorrhages. Hæmoptysis as well as hæmatemesis was afterwards studied in detail; and M. Roger demonstrated by numerous cases that these hemorrhages are exceptional in children. In nearly all cases of whooping-cough, there is pseudo-hæmoptysis, the blood being furnished by the nasal fossæ, the pharynx, the mouth and gums, and never by the pulmonary organs. After epistaxis, the most ordinary hemorrhage is that from the mouth at the moment of the fits of coughing. The gums are congested, become fungous, and bleed; the tongue, violently projected during the paroxysms, becomes eroded by the friction of its lower surface against the teeth, frequently producing ulcers of the frænum; sometimes it is even bitten. The lips are dry, and the little invalid often pulls off the epidermis; and every erosion or ulceration, however small, bleeds when the cough comes on. The starting-point of the buccal hemorrhages is sometimes in the gums, and sometimes in a lesion of the mucous membrane or tongue. The blood may also come from the pharynx, and especially from the nasal fossæ; and, in the latter case, the buccal hemorrhage is accompanied and led off by epistaxis. Sometimes the blood ejected from the mouth has a complex origin, and proceeds both from the nasal mucous membrane and from the buccal cavity. It is only at the end of the paroxysm of coughing that the child throws up bloody froth, arising from the intimate mixture of the blood with the bronchial mucous matter broken up and aërated. This expulsion of blood is of very little moment; and yet few symptoms produce greater alarm in the relatives, and even in the medical attendant of the patient, simply because this bloody ptyalism is taken for an hæmoptysis. Children suffering from prolonged attacks of whooping-cough might have been suspected to be affected by tuberculosis. Examination of the mouth, however, would have been sufficient to indicate the source of the blood. M. Roger has shown that it is only after their tenth year that young subjects are liable to spitting of blood; and that this symptom, which nearly always marks the commencement of phthisis in adults, is exceptional. Early childhood, which is ruthlessly ravaged by tuberculosis, may be pronounced exempt from hæmoptysis; pulmonary hemorrhage rarely, if ever, being at that age the initial symptom of phthisis. M. Roger does not hold that true hæmoptysis is impossible; but he affirms that it is rare, and on this point differs from Trousseau, who asserts

it to be rather general. In the same way as there is pseudo-hæmoptysis in whooping-cough, there is also pseudo-hæmatemesis. When a child suffering with whooping-cough seems to vomit blood, the nasal fossæ should be carefully examined; and it is soon seen that the blood has flowed by the posterior nares, and often insensibly into the stomach, where it may accumulate in considerable quantity. If it be expelled almost immediately, the flux by the nostrils is still visible; if it be tardily evacuated, when the epistaxis has ceased, some drops or clots on the nose may point out whence it comes. Hæmatemesis is, like hæmoptysis, quite exceptional in extreme youth, and only very rarely met with in sparse cases of purpura hemorrhagica. To resume: there are two kinds of hemorrhages—hæmatemesis and hæmoptysis—which the physician should erase from the list of the complications of whooping-cough.—*British Med. Journal*, January 3, 1880.

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The Terminations of Pneumonia.

Few observations or theories in medicine which have once been regarded as unassailable, escape question in succeeding generations. Many of them also undergo a period of denial and sometimes of re-establishment. Further investigation demonstrates that the observations, if not the theories, of older workers deserved more regard than had always been accorded to them. The question of the terminations of pneumonia furnishes an illustration of this, as Professor LEYDEN has shown in an excellent lecture delivered to the Charité Medical Society, and published in the *Berlin Klin. Wochenschrift*. The old pathologists taught that pneumonia which did not resolve might end in suppuration, in gangrene, or in chronic inflammation and induration; and although in this country these methods of ending, as occasional rare events, have perhaps never been doubted, they have not escaped question at the hands of German pathologists, more than one of whom has doubted whether these terminations of acute fibrinous pneumonia ever actually occurs. The occurrence of these events is in itself extremely difficult of proof, the ground for doubt being the question whether the pneumonia thus ending was really of the acute fibrinous variety in a previously healthy lung, a point naturally not easy of demonstration.

The termination of acute pneumonia in suppuration, in abscess of the lung, was first doubted by Laennec, and it is certain that such ending is far less common than was at one time assumed; but it must, in Leyden's opinion, be regarded as unquestionable, and he cites a well-marked instance which has been recorded in the last volume of the "Charité Annalen." A similar doubt has been expressed regarding the termination in gangrene. It is certain that a large number of the cases of inflammation of the lung which terminate in gangrene have a special type, which suggests that they differ essentially from cases of primary fibrinous pneumonia. Crucial cases are difficult to find, but Leyden in this paper adds another to a series previously published—a case in which the patient came under observation on the fifth day of illness and died on the twenty-third, and hepatization in the lower lobe coexisted with diffuse gangrene in the upper. There was no trace of circumscribed or embolic process. The patient was extremely prostrated by the pneumonia, and with the diminution of the fever the heart's weakness increased still more, and it is assumed that the compression of the vessels by the exudation was greater than the feeble heart could overcome.

The question of the termination of pneumonia in chronic inflammation of the lung is of the greatest practical importance and of the greatest difficulty. We must consider, not merely its termination in induration, but in all those chronic processes which may lead to phthisis—as caseous pneumonia and desquamative

pneumonia. Can phthisis result from acute pneumonia in a previously healthy lung? At first sight the answer appears simple. Many cases of phthisis appear from their history unquestionably to have commenced with acute pneumonia. But more careful examination into the history of such cases demonstrates that in the majority, the pneumonia was not of regular course, but was evidently subacute or chronic. Cases in which the pneumonia was really acute are very rare, and even here we are in doubt as to whether the lung was not previously the seat of phthisical changes. The difficulty of the proof is very great in the case of hospital patients, who come under treatment only when the disease is developed or advanced, and Leyden believes that the process has not yet been demonstrably proved, while one of the first authorities in Germany, Buhl, denies that it occurs.

If we consider the anatomical processes, fibrinous pneumonia appears at first far enough removed from the changes in phthisis, but in the stage of resolution the difference between the two processes is smaller, and is diminished still further if we deny that the phthisical process has any specific characters. Thus the possibility of the result must, on anatomical grounds, be conceded, and its clinical probability, as we have seen, is great, but the actual proof has not yet been given, and is not quite furnished even by a case which Leyden adduces as affording almost a proof. The pneumonia came on in a man twenty-two years of age, after exposure to cold, but at an interval of fourteen days, which constitutes a weak point in the case. The inflammation ran a normal course, except for the incompleteness of resolution. The temperature became natural, but shortly afterwards the investigation of the sputum showed the existence of commencing phthisis, which the physical signs soon confirmed.

Simple retarded resolution in pneumonia is a condition of much practical importance. In some cases the physical signs remain for weeks, and even months, and then slowly disappear. Leyden states correctly that many such cases, coming under treatment at a later stage, are regarded as cases of phthisis, and help to swell the numbers of cases of consumption. Their distinction may be, as Walshe long ago insisted, most difficult. Leyden points out as the differential signs the persistence of the crepitant-râle at the end of inspiration (by no means, however, we think, always to be heard), the absence of large mucous râles, the slight degree or absence of retraction, and especially the examination of the sputum. This is scanty, greenish-yellow, and consists of fine threads and small globes, which are composed of pus-corpuscles and degenerated epithelium of the air-cells. He insists strongly on the importance of the microscopical examination of the expectoration in all such cases, and adds a series of illustrative cases, one of which is particularly instructive, since the pneumonia came on under observation, the patient being in hospital on account of enlargement of the liver, and ultimately dying of ulcerative endocarditis.

With regard to the causes of retarded resolution, Leyden points out that the process is influenced by age, occurring less readily in the old, but that this rule is of very limited application, since most of the cases he has recorded occurred in youthful persons. Physicians who see much of the diseases of children will probably agree with us, moreover, that the process is seen now and then in striking form quite early in life. We call to mind a case in which an acute basic pneumonia, of typical course, in a boy of five years, remained unresolved for three months, and then only cleared on removal to a higher altitude. Leyden insists also, with justice, on the influence of weakening of the circulation by the pyrexia, or by the other causes, and instances the tardy resorption of inflammatory exudation generally, in the pleura, pericardium, or peritoneum in those whose strength is low. A second, also important, element he believes to be an

unusual density of the infiltration. Most of his cases suggested such a condition in an intense degree of dulness and slightness of râle. Similar dense infiltration is sometimes found in the young, so as to quench every sound at the height of the pneumonia. In the case which was investigated after death the view was confirmed in so far that, in many alveoli, there were very dense and firm plugs of fibrin, and it is readily conceivable that such plugs may resist disintegration much longer than those which commonly occur. An important aspect of the question is as to the anatomical changes which take place in the lungs in these cases, and which do not pass away when the retarded resolution takes place. Do such lungs recover perfectly, or are there not always changes in varying degree similar to those the origin of which has been admirably traced by Dr. Wilson Fox in his article on Chronic Pneumonia in Reynolds's "System of Medicine." It is hardly conceivable that a lung can remain functionless for months, with solid instead of air within the air-cells, with the circulation persisting so as to nourish the walls of the air-cells, without these undergoing perversion of nutrition such as to prevent them recovering a normal state, even though the exudation within them is cleared completely. The point must await future investigation for its settlement.—*Lancet*, Jan. 3, 1880.

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Iodide of Potassium and Iodide of Iron in Tuberculosis.

M. LEBERT, in his newly published work on Pulmonary Phthisis, devotes a chapter to the treatment of this disease. His practice in this respect differs notably from that usually adopted. Convinced of the inflammatory nature of tuberculosis, M. Lebert makes frequent use of iodide of potassium, which he has never found injurious, but, on the contrary, very advantageous in slightly developed tuberculosis. It must not be prescribed when hectic fever, caverns, and consumption supervene; not that it is injurious, but simply ineffective. In the first phases of tubercular evolution, even after a certain number of foci have formed, it may do good service, but it must be given persistently and in doses from thirty centigrammes (4½ grains) to one or two grammes (15 or 30 grains) daily. It is the same with iron, and the iodide of iron, which, notwithstanding the fear in which it is held by many physicians, is useful as soon as weakness and anæmia progress. According to M. Lebert, the best preparation is Blanchard's pills, of which he gives two at first, going on to six or more in the four and twenty hours. Syrup of iodide of iron made according to the following formula is also a favourite medicine with M. Lebert: Iodide of potassium, 4 grammes; sulphate of iron, 2 to 3 grammes; cinnamon water, 30 grammes; syrup of orange flower water, or syrup of orange peel, 150 grammes. A dessertspoonful is to be taken twice a day at first, and increased gradually to two or three tablespoonfuls in twenty-four hours. M. Lebert also recommends benzoate of iron and cod-liver oil combined, with iodide of iron in somewhat complex preparations. He often also prescribes iron when not in combination with iodine. He readily prescribes from twenty to thirty centigrammes of lactate of iron per diem, or in dyspeptic conditions he administers an effervescing powder composed as follows: Lactate of iron, 4 grammes; bicarbonate of soda, 12 grammes; tartaric acid, 9 grammes; sugar, 4 grammes. This should be compounded and put into a wide-mouthed bottle. The patient takes it twice a day in doses of half a teaspoonful or a teaspoonful in a quarter of a glass of sugar-water at the moment of effervescence. Iron does not act in tuberculous maladies directly on the foci of the disease, but specially on digestion and nutrition, and helps to restore the strength. It is generally useful in tuberculosis, whether more or less advanced. It is still the best remedy in those chloro-anæmic conditions which without actually belong-

ing to phthisis yet predispose powerfully to it.—*London Med. Record*, Jan. 15, 1880.

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On Patency of the Interventricular Septum.

M. Roger's conclusions (*La France Médicale*, No. 86, 1879) on this subject are as follows. There is a malformation of the heart, in which there is no cyanosis, though a free mixture of the venous and arterial blood takes place. This malformation, which is compatible with life and even with a prolonged existence, when it is simple and without the co-existence of a stenosis, also congenital, of the pulmonary artery, is patency of the ventricular septum. It is revealed only by auscultation; it is indicated by a physical sign, of which the characters are quite special. There is a murmur very prolonged and unique, which commences at the systole, and is prolonged in such a way as to entirely cover the natural tic-tac; it has its maximum, not at the apex, as in alterations of the auriculo-ventricular orifices, nor at the right base, as in contraction of the aorta, nor at the left, as in pulmonary stenosis, but at the superior third of the præcordial region; it is median, as is the septum, and from this central point it diminishes in intensity regularly and in proportion as it extends; it is fixed, and not propagated into the vessels; it is associated with no other sign of organic affection except purring tremor. An anomalous *bruit*, possessing this group of characters, is the pathognomonic sign of patency of the interventricular septum. The age of the patient is an important element in the diagnosis; a murmur in an infant at the breast being almost certainly an indication of some anomaly of the central circulation. The prognosis is far less grave than in cardiac disease, as life may be prolonged to beyond middle age. As regards treatment, the diagnosis is important; for, while active treatment is necessary in cardiac disease, it is useless, and even harmful, in cases of malformation.—*Lond. Med. Record*, Jan. 15, 1880.

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Employment of Pilocarpine in Uræmia.

We give a summary (*Deutsch Med. Wochen.*, No. 26, 1879) of four observations by M. Bægchold, of cases marked uræmia, in which pilocarpine was employed in the form of subcutaneous injections.

Case 1.—Child, aged five years. Grave uræmia during convalescence from scarlatina. An injection was made of eight milligrammes of pilocarpine; convulsions ceased at the end of an hour, and she recovered consciousness. After some days a fresh attack was cured in the same way by two similar injections. The injections were made regularly during twenty days, and the attacks were not renewed. Ten days later the albumen had disappeared, and the cure was complete.

Case 2.—Boy of twelve years, seized with uræmic convulsions during convalescence from scarlatina. Injections of one centigramme of pilocarpine stopped the convulsions at the end of six minutes on two different relapses. Cured.

Case 3.—The injections stopped the convulsions, but the patient was comatose, and death ensued.

Case 4.—Aged seven years; chronic nephritis. Convulsions ceased under the influence of pilocarpine injections, but the child succumbed to the progress of the disease.

The results obtained by Bægchold appear to show that pilocarpine may be a useful agent to combat one of the most alarming and most dangerous symptoms, but its utility against the disease itself seems to us doubtful. However, as it stops the convulsions, it might be, perhaps, favourably employed in puerperal

eclampsia; and this is a point which deserves consideration.—*Gazette Hebdomadaire*, Jan. 30, 1880.

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Pyonephrosis, and Excretion of Liquid Fat and Hæmatoidin Crystals through the Urine.

Professor EBSTEIN publishes in the *Deutsches Arch. für Klin. Med.*, Band xxiii, the following case, which had come under his notice. A woman aged 34 had been suddenly taken ill with high fever and gastric disturbance. When received into the hospital seven days later, the temperature had become normal; but on the left side of the abdomen was a swelling of the size of a child's head, which evidently belonged to the left kidney. The secretion of urine was scanty, though normal. Twelve days after she entered the hospital, she began to complain of pain resembling a sharp attack of colic, in the region of the bladder and the left ureter. The urine which was passed at that time was strongly tinged with blood, and contained a great quantity of clots of blood, but no casts. During the following days, the renal tumour decreased in size; but the urine continued to be bloody for the next eight days. The quantity of urine excreted had considerably increased. Six days after hæmaturia had first been observed, it was noticed that the urine, after standing, became covered with a layer of numerous drops of fat, giving it the appearance of very rich *bouillon*. This secretion of fat through the urine continued for the next four weeks, when the patient left the hospital. If examined immediately after the urine had been passed, the drops of fat were of a fine yellow colour, clear and transparent; but, on having been allowed to stand, they presented a grayish colouring, and coagulated into whitish scaly masses. When examined under the microscope, the latter were seen to consist of bundles of fine and slightly curved acicular crystals and hæmatoidin crystals, and of amorphous pigment. The sediment of the urine contained red blood-corpuscles, pus-cells, pavement-epithelium, occasional fat drops which contained needle-shaped crystalline bodies, and yellowish shreds and patches resembling blood clots in a state of degeneration, and containing large numbers of the fat drops described above. Renal epithelium or casts were never observed. Ebstein supposes that the case was one of pyonephrosis of the left kidney, or rather a case of "pyo-hæmatoliponephrosis;" and that the excretion of fat and hæmatoidin was caused by the degeneration of the blood-clots.—*British Med. Journal*, January 3, 1880.

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The Relationship of Bright's Disease to other Diseases. The Secondary Forms of Nephritis.

The subject of Bright's disease is one which is far from being exhausted as yet, and many points in its history still require elucidation. Professor BAMBERGER, of Vienna, has therefore done good service[1] in utilizing the vast resources of the Allgemines Krankenhaus to try and clear up difficulties and open up new paths of investigation into the pathology of this disease. His essay is founded on his own long clinical experience, and also on 2430 post-mortem examinations in which the anatomical diagnosis of Bright's disease has been made in the Pathological Institute at Vienna during the last twelve years. The total number of patients of all kinds, excluding children, during this period was about 250,000, the total number of necropsies 19,000. The cases diagnosed as Bright's disease do not include amyloid disease, or nephritis due to circulatory obstruction (*Stau-*

[1] "Ueber Morbus Brightii und seine Beziehungen zu anderer Krankheiten." (Volkmann's Sammlung Klinischer Vorträge, No. 178.)

ungs-Hyperämie) or to embolism or pyæmia, unless accompanied with true parenchymatous or interstitial nephritis. On the other hand, they include the nephritis which occurs in acute infectious diseases, and especially in typhoid and puerperal fevers, this form being classed under the head of acute Bright's disease. The Vienna pathological classification arranges cases of Bright's disease under three heads, the acute, the chronic, and the atrophic. Those cases in which the kidneys exhibit the anatomical appearances of inflammatory swelling are under this system reckoned as "acute," though clinically they may be chronic cases with acute exacerbation. By "chronic" is meant that form of nephritis in which the epithelial element is chiefly involved (parenchymatous, or tubal nephritis); by "atrophic," that which is known in England as interstitial nephritis, where the bulk of the organ becomes gradually reduced by connective tissue proliferation and contraction.

With regard to this classification, we should say that Professor Bamberger recognizes no abrupt line of demarcation between the parenchymatous or tubular, and the interstitial or granular contracted forms of chronic nephritis. They shade insensibly into one another when a large number of cases of Bright's disease are examined post-mortem. There are marked examples of both forms, and endless intermediate forms between the two extremes. The same is true of the *clinical* history when a sufficient number of cases are observed. We get typical examples of chronic Bright's disease where the symptoms of the classical descriptions of tubular and interstitial nephritis are found associated, each with their proper morbid appearances. On the other hand, as Bamberger points out, there are three other contingencies. In the first place, cases diagnosed as interstitial nephritis during life turn out at the necropsy to be either cases of tubular (parenchymatous) nephritis, or combinations of the latter with interstitial changes or even with amyloid degeneration; or, secondly, the symptoms may be very nearly those of tubular nephritis and the kidneys be in a highly contracted state; or, thirdly, the symptoms may correspond partly (especially in the earlier stages) to those tubular and partly (especially in the latter stages) to those of interstitial nephritis. Hence Bamberger's experience leads him to the belief "that the clinical aspect of Bright's disease depends less on the anatomical form of the kidney-mischief than on the acute or chronic character of the illness, and on the conditions which accompany and follow it—*e. g.*, renal hyperæmia and hemorrhage and cardiac hypertrophy." We should remark, in passing, that among German pathologists the tendency appears to be less to discriminate a number of characteristic forms of Bright's kidney than to show how interstitial, tubular, and even amyloid changes may occur in varying proportions in all possible combinations with one another. Our space will not permit us here to do more than refer in proof of this statement to the recent admirable essay of Dr. Carl Weigert, of Leipsic,[1] which sums up the results of several years exclusive work at the pathology of Bright's disease. Weigert comes to the conclusion that interstitial and tubular changes are inseparable in the same kidney, that degeneration of renal epithelium is a prime factor in the production of interstitial connective tissue proliferation, and that our classification of the forms of Bright's disease must mainly be based on their *chronicity*. Hence his provisional arrangement of them is into four groups—acute, subchronic, chronic, and very chronic nephritis; the symptoms corresponding to each form depending on the predominance of tubular disease in the acute and subchronic forms, and on the gradual coming to the form of interstitial changes and granular contraction in the chronic and very chronic forms. We shall hope to speak more in detail of Dr. Weigert's essay at some other time.

[1] "Die Bright'sche Nierenerkrankung vom pathologisch-anatomischen Standpunkte." (Volkmann's Sammlung Klinischer Vorträge, Nos. 165, 163.)

To return to Professor Bamberger: he has utilized the material at his disposal for two main purposes—first, to study the relations of Bright's disease to other antecedent diseases; and secondly, to clear up the natural history of this affection when occurring as a primary disease in a previously healthy person, especially with reference to its complications and sequelæ. In this part of the subject he enters at considerable length into the discussion of the mode of origin of cardiac hypertrophy in chronic Bright's disease. It will be best to follow Professor Bamberger's plan, and treat first of the secondary forms of nephritis. Of these, 1623, or 67 per cent. were represented in his 2430 cases. Anatomically, the secondary and primary forms differ but slightly. Amyloid disease of the renal arterioles is, however, much more common in the former, while the alterations in the kidney generally are also usually less advanced in it than in the primary forms, because the latter are seldom fatal in the acute stage, and generally have undergone considerable development before they are met with on the post-mortem table. Clinically, the secondary forms of Bright's disease are characterized by the frequency with which the renal symptoms are overshadowed and obscured by those of the original disease, and by the rarity of cardiac hypertrophy (3.3 per cent. in the secondary, against 42.6 per cent. in the primary form), except in cases with concomitant valvular disease, endarteritis, aneurism, or emphysema. The following table represents numerically the etiological relationship of secondary Bright's disease to other diseases, and the proportion of acute, chronic, and atrophic (granular contracted) cases associated with each. The percentages refer to the total number of the cases investigated, both primary and secondary, viz., 2430:—

Primary disease.	Bright's disease. Acute form.	Chronic form.	Atrophic form.	Total.	Per-centages.
Tuberculosis, phthisis, scrofula	47	257	76	380	15.7
Valvular disease of heart	19	117	86	222	9.1
Pregnancy and puerperal affections	80	56	16	152	6.3
Diseases of urinary organs	11	72	51	134	5.5
Suppurative process	42	77	10	129	5.2
Alcoholism, cirrhosis of liver	16	68	33	117	4.8
Cancer	13	55	35	103	4.2
Emphysema of lungs	6	51	28	85	3.5
Typhoid fever	42	14	2	58	2.4
Syphilis	4	29	16	49	2.0
Scarlet fever	18	0	0	18	0.7
Intermittent fever	1	9	3	13	0.5

A few cases not included in this table were the results of cholera, pneumonia, diphtheria, smallpox, scurvy, dysentery, etc.

What strikes us most in this table is the remarkable frequency with which Bright's disease and phthisical and scrofulous processes are associated. Bamberger believes that this point has never before been brought out with sufficient clearness by other observers. As far as English writers on phthisis are concerned, we have long been surprised at the way in which the subject of the connection between phthisis and albuminuria has been passed over by them. We should probably be within the mark if we said that our authorities on renal disease, with one or two exceptions, have also been contented to consider amyloid degeneration as the only common form of renal disease which complicates phthisis. As a fact, Bamberger finds that while amyloid disease in the kidneys and in other organs is a tolerably frequent attendant on chronic phthisis, the parenchymatous or tubular form of nephritis is far the most common condition. True tuberculosis of the

kidneys, and caseous inflammation of the mucous membrane of their pelves are, on the whole, very seldom met with. Professor Bamberger considers that clinical experience can leave scarcely a doubt that the phthisis is really the antecedent of the nephritis, and not *vice versa;* and he points out how rarely phthisis actually occurs in persons who are already the subjects of Bright's disease. Valvular diseases of the heart, which come next in the list, include all forms of these affections, one of the commonest in association with renal disease being simultaneous disease of the mitral and aortic valves. Bamberger regards venous stasis as at least one factor in the production of tubular and interstitial changes. The number of cases of chronic and atrophic Bright's disease, especially the latter, associated with the pregnant and puerperal state is interesting; and Bamberger is of opinion that in some of them the nephritis must have existed before pregnancy, for else the time would have been too short for the process to have reached the atrophic stage. We shall see in another article that *primary* Bright's disease is more common in women than is generally supposed; but we should also remember how rapidly interstitial alterations may follow tubular nephritis, as Aufrecht found in rabbits in which the ureter of one side was tied.[1] We need scarcely discuss here the relationship of Bright's disease to diseases of the pelvis of the kidneys, of the ureters, and of the bladder, for it has long attracted the attention of surgeons. Bamberger specially notices hydronephrosis and pyelitis and purulent nephritis as frequent complications in this section. The frequency of amyloid disease in connection with chronic suppuration is also well known. The effect of chronic alcoholism in inducing Bright's disease seems clear from Bamberger's table, though some authorities have tried to deny it. It is chiefly the ulcerative and multiple forms of cancer which are associated with renal diseases. With regard to emphysema, Bamberger thinks that it is sometimes not the cause, but the result, of the Bright's disease, and arises in consequence of capillary bronchitis secondary to the latter. Sometimes the two affections may be merely collateral, and both dependent on the patient's age. The condition of the heart he considers the best guide to the determination of their causal relationship to each other. "If the emphysema is the primary disease, the right side of the heart is hypertrophied, the left normal. If the left side is also hypertrophied, the emphysema cannot be the primary disease, but either a sequela or a chance complication of the nephritis, and the nephritis is probably primary, seeing that secondary Bright's disease very rarely leads to cardiac hypertrophy." The other sections of the table need not detain us; we need only observe that Bright's disease as a sequela of scarlet fever is so sparingly represented in it because at Vienna, as a rule, children under twelve years—who, of course, are its chief victims—enter the St. Anne's Children's Hospital, instead of the General Hospital.

Turning now to the common factors which must exist in all the diseases that are found to give rise to Bright's disease, Professor Bamberger points out that they can be arranged in three groups, each of which is based on a distinct pathological element. In the first group, which is also the most important of the three, this element is of a poisonous nature. The kidneys are damaged by some chemical substance which passes through them as the great excretory organs of waste products, and which may either be introduced into the system from without, or be manufactured in the system itself. Of the former class alcohol is the chief representative; other bodies which irritate the kidneys, such as cantharides and squills, are known, but their effects are temporary, and it is uncertain whether their prolonged use in small doses would excite actual nephritis. Bamberger is skeptical as to the toxic action of lead, whereas it is admitted by Weigert in his

[1] Centralblatt Med. Wiss., Nos. 19, 35, 1878.

essay. Would Bamberger deny that there is some causal relationship between lead-poisoning, gout, and granular contracted kidney? The poisons manufactured in the system itself are probably more important factors in the production of chronic Bright's disease than those external to it. They are the products "of self-infection, caused by the absorption of organic material destroyed by suppuration or gangrene, and of the lowly organized, rapidly proliferating bodies which cling closely to it." In this category we have scrofula, tuberculosis, and phthisis, caries and necrosis of the bones, suppurative inflammation of the joints, skin, and subcutaneous connective tissue, ulcerating cancer, typhoid ulcers of the bowel, etc. "More than a third of all the secondary forms of Bright's disease," says Bamberger, "may probably be referred to it."

The element in the second group is venous congestion due to heart or lung disease. It needs no detailed discussion. In the third, and the numerically smallest group, the exciting cause of nephritis is retention of secretion owing to mechanical obstruction, such as urethral stricture, pressure on the ureters, and the like. It is difficult to decide whether the stagnating secretion exerts a chemical as well as a mechanical action on the kidney. Bamberger inclines to the belief that it does both; and he also considers that in some cases of chronic Bright's disease a combination of two, or even of all three of the groups, may have been at work. Thus, in pregnancy, venous stasis and pressure on the ureters may both co-operate, and in puerperal inflammations the toxic element of the first group may be superadded.

In another article we shall offer our readers the results of Bamberger's investigation of the primary form of Bright's disease, which are no less instructive than those we have just been discussing.—*Med. Times and Gazette*, Jan. 3, 1880.

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On the Combination of Lupus and Carcinoma.

Kaposi (*Viertelj. f. Dermat.*) has thrice remarked the combination of lupus and cancer. Two of these have been already described. The third affected a day labourer, forty-three years of age, who had suffered from lupus on various parts of the body for thirty years. In the centre of a large patch of lupus on the upper arm there was a prominent tumour, warty in character, of the size of the fist, which secreted a rank-smelling discharge and was gangrenous in parts. This was separated by a furrow 4 mm. broad from the surrounding lupus surface, and had developed in the course of a few months. The tumour was an epithelial cancer, whose cancer elements pushed their way between the lupus nests. Kaposi insists that a structural transformation between lupus and cancer in ordinary cases of lupus can scarcely be accepted in endeavouring to find some histogenetic reason for the development of cancer out of lupus. But in lupus epithelial hyperplasia occurs in an abnormal form, in which the rete pushes down long projections into the inflamed and lupus-infiltrated corium. These form a mesh-work of epithelial cells in the latter, and convey the impression of an epithelioma. Kaposi sees in such a non-typical cell growth, when associated with lupus, the basis and opportunity for the development of cancer, the further rapid progress of which in the lupus areas is easily explained by its pathological nature. The operative removal in this case was conducted by means of an elastic ligature, by the galvanic cautery, and later on by destruction by caustic potash. The result was favourable. Kaposi suggests, as useful in such cases, the painless cauterization by an ointment of pyrogallic acid, which he has recently had under trial.—*Edinburgh Med. Journal*, Dec. 1879.

Surgery.

Treatment of an Erectile Tumour by the Injection of Chloral.

In a case of rapidly extending erectile tumour, situated in the naso-palpebral region, Dr. ANTONIO PUPI (*La France Médicale*, No. 83), after failing to arrest the disease by other methods, succeeded in curing it by injecting chloral into the base of the tumour. He was led to try this method from the fact that chloral is not only a hæmostatic and cicatrisant, but that it also has the power of coagulating recently drawn blood, the coagulum so formed being insoluble. Three injections were made, at intervals of fifteen days, the strength of the solution being 1 to 10 of distilled water. Each injection was followed by tumefaction, which, however, was painless, and lasted only four or five days. The cure was so complete, that the traces of the tumour could be detected only by one who was acquainted with the case.—*Lond. Med. Record*, Jan. 15, 1880.

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Treatment of Dacryocystitis and Lachrymal Fistula.

Every surgeon knows how tedious and unsatisfactory the treatment of such cases often is, and how much patience and perseverance is necessary to obtain even a very small modicum of success. Dr. FONSECA (*Correio de Medico de Lisboa*, No. 22, November 15) proposes to remove this reproach from surgery, and has published a series of cases in which he has successfully treated epiphora dacryocystitis, and lachrymal fistulæ, by means of very small probe-pointed sounds, uniform in size. These are passed into the sac, either through the upper or the lower punctum, without previous incision. This treatment can often be advantageously supplemented by injections of cold water. The same sized probe should always be used, and that at intervals of three or four days. The author is opposed to the use of a series of probes of increasing size, and considers Bowman's treatment unnecessarily severe. One case of epiphora, complicated with dacryocystitis and fistula of five years' standing, was cured completely in sixteen days. The author concedes that the method may not be applicable to all cases; but where it is applicable, it will give better results, with more rapidity and with less risk of danger to the mechanism of the parts, than any he is acquainted with. [The above treatment has already been extensively practised by Becker of Heidelberg, and Dr. de Wecker of Paris. The author is, no doubt, right in his views regarding the value of injections, and the unnecessarily large probes that are often passed. In most cases, however, a partial slitting up of the canaliculus will be found necessary. Injections can only be of use in cases where, along with an unhealthy condition of the mucous membrane of the sac, the puncta are not displaced or the canaliculi or ducts organically altered.]—*Lond. Med. Record*, Jan. 15, 1880.

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Atrophy of the Optic Nerve in Erysipelas of the Face.

PARINAUD (*Centralb. für d. Med. Wiss.* 1879, p. 614; from *Archives Gén.*) says that only six cases of this nature can be found in literature. He describes two additional instances. The first is that of a woman, aged 26, who ad suffered from erysipelas running its usual course, and in whom a sudden increase of temperature took place, with severe headache on the left side. During the next few days, the patient observed a marked diminution in the sight of the left eye, while the right became almost totally blind. Ophthalmoscopic examination showed neuritis anterior. At the end of a month, distinctness of vision had

somewhat improved, but it never entirely returned. The second case, in a person aged 59, was very similar, both eyes, however, being affected to about the same degree. In five of the cases referred to, one eye only was affected. In the sixth case, as in Parinaud's, both were diseased. Parinaud thinks that the unilateral eye-trouble depends upon an affection of the optic nerve alone, which does not extend to the chiasma. In the double cases, the origin of the trouble is to be sought for in the central organ.—*Lond. Med. Record*, Jan. 15, 1880.

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Apparatus for Washing Out the Middle Ear.

In the *Deutsche Med. Wochenschrift* of November 1, Dr. A. HARTMANN of Berlin describes an instrument which he has devised for washing out the cavity of the tympanum. This consists of a straight silver tube two millimetres thick and eight centimetres long, the middle portion of which is perfectly straight, the end for insertion into the tympanic cavity being bent at nearly a right angle; this bent part measures only about one millimetre. The opposite end of the tube is curved at an open angle, and swells out so as to afford attachment to an India-rubber tube connected with a syringe. The tubing should be as thin and light as possible. The instrument is generally introduced into the tympanum through the speculum, and with the light reflected from the usual mirror. In using the apparatus, only a very gentle stream should at first be injected, and if this be well borne, it can be gradually rendered stronger. The conditions in which washing out the cavity of the tympanum is indicated are, in the author's opinion, the following. (1) In all cases of chronic purulent inflammation of the middle ear, in which it is suspected that, besides the secretions removed by the usual injection, there remain others accumulated in crevices in the tympanum or in the mastoid cells. (2) In patients suffering, or who have recently suffered, from inflammation of the middle ear, if symptoms of inflammatory irritation, or indications of pressure, stupor, headache, or giddiness arise, which suggest the presence of accumulated secretions in the tympanum or its communicating cavities. (3) In caries of the external auditory canal. The author has used his apparatus in such cases, introducing the point of the tube into the fistulous opening, and cleansing the part with a stream of water.—*Lond. Med. Record*, Jan. 15, 1880.

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On the Operative Surgery of the Digestive Tract.

One of the cases related by KRONLEIN (*Berlin. Klin. Wochenschrift*, 1879, No. 34–35), is a successful case of gastrostomy. The stricture was due to annular cancer at about the middle of the œsophagus, in a labourer, aged 71. It was impassable even to fluid food. The incision was made parallel to the arches of the left ribs. The wound in the stomach was attached to the abdominal wound under antiseptic precautions, and the stomach was opened five days afterwards. From that time forward, nutrition was entirely carried on by the wound. The result was favourable, except that the patient suffered from very severe thirst which, however, could be fully satisfied by continuous chewing of tobacco. Two months later, the patient died from his cancer. The second case is a very interesting one. A child, six days old, had had no evacuation of the bowels since its birth. The anus was extremely narrow and terminated in a *cul-de-sac* at 2·5 centimetres high. After division of this in the antero-posterior median line, Kronlein endeavoured to reach the upper *cul-de-sac*. He only succeeded in opening the cavity of the abdomen, from which peritoneal exudation was freely evacuated. The upper *cul-de-sac*, however, was not reached. Laparotomy was then performed in the left groin, and a coil of the small intestine was drawn into the abdominal wound, fixed there, and opened. Contrary to expectation, the

child lived and thrived under regular nourishment. Further search and attempts to sound the intestine below from the artificial anus failed. When, however, the child had grown to be seven months old, the upper end of the intestine ending in the *cul-de-sac* could be felt. The previous operation was again undertaken, and the upper *cul-de-sac* successfully united with the lower. At the close of the report a stricture existed at the place of union, but the larger part of the contents of the bowel were already evacuated by the natural anus.—*London Med. Record*, Jan. 15, 1880.

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Gastrostomy for Strictures of the Œsophagus.

SKLEFFASSOWSKI (*Medizinski Westnik*, 1879, Nos. 21 and 24) relates in detail the case of a man, aged 38, who was suffering from complete cancerous obstruction of the œsophagus, and had for fifteen days been nourished by enemata, as at last not even water could pass the stricture. The operation was very successfully performed according to the accepted method, with strict antiseptic precautions, and the stomach opened by an incision passing from the ziphoid process, opposite the border of the eighth rib, to the left outwards for 2·4 inches. The opening in the stomach was stitched to the wounds in the walls of the abdomen by catgut ligatures: for a time the patient showed signs of favourable reaction. He was nourished by a little milk and sherry every three hours. But he fell off again in twenty hours, and died with symptoms of pneumonia. The left lung showed universal adhesions to the pleura, and bronchiectatic caverns. The aperture in the stomach was an inch below the cardiac entrance, and was adherent to the abdominal wall.—*London Med. Record*, Jan. 15, 1880.

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Use of Cold Baths in Strangulated Hernia.

The use of cold in the treatment of strangulated hernia (*Wiener Medizinische Wochenschrift*, No. 26–27) has been often and much recommended for a long series of years, sometimes in the form of bladders of ice, sometimes in the form of cold compresses. These methods have, however, the disadvantage that they must be employed for a long time before any result follows; and if none follow, the favourable moment for operation may have been wasted in the unsuccessful attempt. Dr. HEIN observes that in four cases he had perseveringly employed cold applications to the tumour, without bringing about its reduction. On the other hand, he had in two cases favourable results with cold baths, by which he obtained an effect of cold upon the whole intestinal tract. In the first case the patient has had a warm bath ineffectually, and he then put him, sitting up, in a cold bath. The tumour returned of itself while the preparations were being made for the administration of chloroform. In the second case, one of scrotal hernia of the left side, eight hours incarcerated, he gave a bath for fifteen minutes at a temperature of 15 deg. Cent. (59 deg. Fahr.); the reparation was easily effected. Half an hour after the bath, the temperature was 36.4 deg. Cent. (97.5 deg. Fahr.) in the axilla. By this method a lowering of the whole temperature of the body is caused, and thereby contraction of the intestine in its whole length.—*London Med. Record*, Jan. 15, 1880.

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Hydrocele with Cholesterin.

Prof. GOSSELIN reports (*Gaz. des Hôp.*, Jan. 22) the case of a man, aged forty-five years, the subject of a hydrocele, which had become painful in consequence of a slight injury received a few days ago. At first he was inclined to believe it a hæmatocele, owing to the difficulty he had in observing its transpa-

rency. This was at last accomplished by causing the patient to stand in front of a window through which the sun was shining. This difficulty might be due in part to a thickening of the coverings which was present, and to some swelling of the testis—a condition which Prof. Gosselin has found, without knowing why, to prevent seeing the transparency of effusion contained in the tunica vaginalis. About one hundred grammes of liquid were drawn off, and an injection of tincture of iodine (which Prof. Gosselin always dilutes with equal parts of water in subjects of forty or fifty years of age) thrown in. The colour of the liquid was much darker than usual, which explains the difficulty of the diagnosis; and even to the naked eye it was plain that the colour of the liquid was due to scales of cholesterin, with which it was loaded.—*Med. Times and Gaz.*, Jan. 31, 1880.

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Analysis of Forty-five Cases of Excision of the Hip-joint.

At a late meeting of the Clinical Society of London Mr. CROFT, in continuation of the discussion which had originated at the preceding meeting (see *Medical News and Abstract* for February, p. 109), presented an analysis of forty-five cases of hip-joint excision, and remarked that his aim was to show that the operation may be made a successful one, and that greater success attends it when performed before abscesses have opened than later. In every case, before operation other means had been tried to arrest the progress of the disease. Ten cases had urgently needed speedy relief; thirty-five had been treated in the hospital for more extended periods, varying from one month to a year, and no case was operated upon until threatening abscess had manifested itself. Forty-five operations had been performed on fifty-four patients, one child having both joints excised; eighteen cases were cured; eleven were under treatment or observation; six patients had died from causes referable directly or indirectly to the operation; one child died of diphtheria; nine patients had been relieved by operation, but had died, some at long periods, some at shorter periods of time, from causes not attributable to the operation.

Tables giving full details were shown of the eighteen cases cured; twelve cases were exhibited. In fourteen there were movable joints affording flexion and extension, and nine enjoyed a considerable range of flexion, and could perform adduction and abduction to some extent. Four could stand alone firmly and steadily on the limb which had been operated upon. In each patient the limb was straight, without any permanent flexion on the pelvis. Each child stood erect, without any lordosis of the spine. In many the apparent shortening amounted to 3½ inches; but the femur on the diseased side was longer than was apparent, probably from the preservation of the trochanteric epiphysis and the subperiosteal operation (Sayre's) having been done. Of the eighteen cured cases, twelve were instances of chronic panarthritis, commencing, as he thought, in the synovial membrane; and six were instances of disease commencing in ostitis and ending in necrosis. In six, abscess had been incised and sinus had persisted; but in only two of the eighteen cases were the sinuses chronic in duration. In three, perforation of the acetabulum had taken place; whilst in the cases recorded in the list of deaths, chronic sinuses had been open in eleven, and perforation of the acetabulum had been found in five. Thirteen patients had been under treatment in the hospital for periods varying from two days to three months, four from three to six months, and one for eleven months, before operation was resorted to. The total number of the dead was sixteen, including four cases in which, with his present experience, he should not think excision to be the best treatment. The deaths were spread over fourteen years. Five deaths occurred from preventable disease—viz., one from diphtheria, three from pyæ-

mia, and one from septicæmia. Six were attributable, directly or indirectly, to the operation—viz., one from septicæmia, three from pyæmia, one after suppuration in the bone following erysipelas (from shock of amputation at the hip ten months after excision), and one from thrombosis and asthenia sixteen days after excision. The causes of death in the nine other cases (not attributable to operation) were—one from tubercular meningitis, seven from tubercular disease with amyloid viscera, and one from tubercular phthisis and disease of other bones than the pelvis. He had followed up these cases in the interest of science, and though it seemed a large proportion of failures to cures, he ventured to think that, with improved diagnosis, by operating in good time, and by improved methods of operation and after-treatment, the proportion of failures will be considerably diminished.

After some further remarks, Mr. Croft said that several points might be taken up—*e. g.:* 1st. The advantages which he claimed for early, or relatively early, operation. 2d. Formulæ with respect to indications for operative interference. 3d. The mode of operating with reference to the periosteum, the leaving behind the epiphysis of the great trochanter, the line of section through the femur, free removal of parts, the line of incision through the soft parts, and the employment of antiseptics. 4th. The mode of after-treatment. 5th. The causes of failure in excision of the hip-joint. 6th. The comparison of limbs after excision with limbs of those who get well without operation. 7th. The time taken to get well by those not operated on compared with that taken by those successfully excised. As to the indications (No. 2) for operation, he said that when there was fluid in and about the joint and starting pains, an antiseptic incision should be made, to be followed by excision if pus associated with panarthritis (strumous disease) be present or if necrosis existed. The causes of failure (No. 5) were attributable to too late postponement of operation, not removing enough of the diseased parts, not allowing free exit for discharge, and not operating antiseptically. Excision of the hip was less successful than that of the knee, because the disease (*e. g.*, of acetabulum) could not be so thoroughly eradicated. Lastly, he advocated early operation (No. 1) because—(1) in cases of tubercular disease early complete excision affords the best prospect of cure; (2) immediate relief from pain of tension and spasmodic starting pains; (3) that it is made before muscles are much atrophied or altered by inflammatory products; (4) it shortens the duration of suffering and illness; (5) it enables the child to go about earlier than it could if left without interventive treatment; (6) it enables the surgeon to procure a painless, movable joint at the hips; (7) the shortening is only a trifle more than it is in the most favourable cases of anchylosis after destructive strumous disease of the joint.—*Lancet*, Dec. 27, 1879.

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A New Method of Excising the Hip-joint.

At the same meeting Mr. R. W. Parker subsequently read a paper on a New Method of Excising the Hip-joint, and made some general remarks on the pathology and treatment of the disease.

Mary Y——, aged eight years, admitted into the East London Children's Hospital, March, 1879. For two or three weeks previously she complained of acute pain in the knee and right leg generally, and was kept in bed; she had been feverish and lost appetite. On admission the upper part of the thigh and region of the hip were found much swollen and very painful. There was no appreciable fluctuation; the soft parts in the groin were slightly œdematous. No enlargement of glands. Passive movements caused considerable pain. An extension with weight was ordered. About a fortnight after her admission the

following note of her condition was made, after being examined under chloroform: "Hip moves freely; no deep fluctuation detected; there is no grating in the joint. Knee-joint is much swollen. Temperature is high and variable." A low typhoid condition supervened, and for a time she was very ill. At the end of another month she had materially improved in her health, but her local trouble, on the other hand, continued to progress. An abscess now formed in the upper part of the thigh, which had to be opened. Eleven weeks after her admission she was again chloroformed, in order the better to examine the joint. Grating was found, and there was a free discharge of pus from the wound. An incision was made from the anterior superior spine of the ilium downwards, along the anterior border of the great trochanter, cutting between the sartorius and rectus muscles on the inner side, and the tensor and glutei on the outer side. The diseased bone was sawn off *in situ*, and then extracted with sequestrum forceps. While examining the acetabulum a portion of the epiphysis of the femur was found loose and necrosed. The child made a slow recovery. She can now get about, but there are still some open sinuses. Notes of some other cases of epiphysial necrosis were summarized.

The clinical features common to all, or the majority, were—progressive disease in spite of perfect rest in the recumbent position, with extension applied for an average period of three months; comparatively short duration of antecedent symptoms; the early formation of abscesses; young age of the patients. The pathological features were in all cases extensive caries of the neck of femur, epiphysial necrosis, destruction of capsule, free suppuration. The above case was selected because it illustrated three points on which the author would like to offer some observations—(1) As to the modes of operating generally in use; (2) as to the frequency and significance of epiphysial necrosis; and (3) as to the results of the disease with and without operation.

This new method of operation was proposed because it avoided the necessity of cutting across the large muscles attached to the great trochanter, which must necessarily be divided in order to expose the joints from behind. He advocated also the use of a keyhole saw in order to avoid injury to the periosteum and other structures, which forcibly wrenching out the head of the bone would probably occasion. And, without laying too much stress on the mode of incision, it was desirable that this question should be introduced, as the final results of the operation were yet far from satisfactory. He had found epiphysial necrosis in five out of eight cases. It was not until Mr. Hulke referred to it at a former meeting of the Society that he was aware that the condition was considered unusual. He believed, however, that it would be more frequently found if the operation were done in an earlier stage, for if caries of the neck of the femur were the common pathological condition of "hip disease," then this separation ought frequently to occur in consequence of the altered nutrition of the epiphysis. It was all very well to say that hip disease could be cured by rest and sea air. The disease unfortunately occurred among those who could not have these advantages, and hence it assumed very unfavourable conditions. Neither did hospital treatment always avail, as his own cases showed. Hence the importance of deciding on the best operative treatment. He believed that the unsatisfactory results of incision were largely due to delay in carrying them out, for secondary diseases were induced, which quite precluded a satisfactory result. He thought that an exploratory incision should be made into joints, when the disease continued to progress in spite of treatment during three months, and if signs of destruction of the joint occurred before this. The question of excision could then be decided upon.

Mr. HOLMES said that he was much interested in this operation, and formerly

had often performed it. He had not recently collected his cases, but a few years ago he had published his results in the work referred to by Mr. Croft. It was self-evident that the results of excision depend entirely upon the indications selected for the operation, and these indications must vary with the circumstances of each case. Excisions were less common in private practice, where more care was taken in the treatment of these cases from their commencement, and for this our hospital system was inadequate. Cases go from hospital to hospital, continuous rest is not obtained, and eventually they come to excision. He could not agree that the best treatment for abscesses in the neighbourhood of joints was to lay them open antiseptically. The indications were the other way, excision being deferred until actual evidence of destruction of cartilage was obtained. The result of the operation is in itself inferior to the result of natural cure. It is true that in the latter case there is much shortening, but the limb is stronger and more serviceable. He had never seen a patient who could *stand* on the leg after excision of the hip; for, as a general rule, there was undue mobility, and therefore instability—due, as could be seen on dissection, to lengthening and laxity of the ligaments. But patients with anchylosis after natural cure had strong and serviceable limbs, although they might be ungainly in their movements. But there were cases in which excision was called for to preserve life and health, and the efforts of surgeons should be to seek indications to discriminate these cases. It was necessary in such cases as one he had seen Mr. Pick deal with the other day, where there was acetabular disease; and in those which Mr. Parker had cited, where the epiphysis formed a sequestrum; or where a limited amount of disease existed in the neck of the femur which could not be got rid of without excision. There were those cases too, to which Mr. Parker had alluded, which went from bad to worse, in spite of treatment. He allowed that he used to think excision justified in cases where abscesses had formed and the joint was carious, but he now thought that some of these had a chance of cure if free drainage were encouraged. The rate of mortality should not influence the question; for obviously if the cases were only operated on in a very advanced stage the mortality would be high, and every recovery in such circumstances a clear gain. If the operation were done early, the deaths would be fewer, but the gain less. He congratulated Mr. Croft on his success, but took a little exception to the freedom of his measures. Excision of the hip would never be so successful as that of the knee, owing to the difficulty of removing all the disease—*e. g.*, of the acetabulum. He had no experience of antiseptics in this operation, but his results had been much the same as those of Mr. Croft—namely, about one-third died, one-third were cured, and one-third remained in a doubtful condition.

Mr. HULKE said they were indebted to Mr. Croft for his comprehensive analysis, viewing, as he had, the cases from so many sides. At the close of the last meeting they had been under the impression that the rate of mortality in Mr. Croft's cases, in consequence of the operation, had been as high as one-third of all the cases; and his own (Mr. Hulke's) experience, although much more limited, was so different that he ventured to express surprise at the figures. Mr. Croft had, however, now clearly shown that in many of these cases the deaths were not due to the operation itself. In his own hospital practice (for, like Mr. Holmes, he had never had occasion to perform excision in private practice) he found that out of 313 cases of diseased joints in the last ten years, there were 86 examples of hip-joint disease, about 6 of which perhaps were not strictly "morbus coxæ." In these 80 cases he had performed excision 16 times—*i. e.*, 1 in 5; and in only one case could death be fairly attributed to the operation, a proportion probably similar to most others. As to the indications for operating,

he agreed with Mr. Holmes. For even in some of the cases shown by Mr. Croft he doubted whether incision had always been called for. For instance, there was one case which had been operated on after a month's illness, and no evidence of a previously open abscess existed. A more valuable indication than the local evidence was the manner in which the disease was telling on the general constitution. If, in an advanced stage of local disease, the patient be yet in fair health, excision was called for; but if he were losing ground in the earlier stages he would leave him alone. As to the methods, he preferred the external incision, as affording a dependent opening for free drainage; and he always washed out the cavity with chloride of zinc, according to the plan introduced by the late Campbell de Morgan. He claimed to be antiseptic in his practice, always endeavouring to prevent putrefaction; but if by "antiseptics" Mr. Croft meant Listerism, he had never adopted that. Mr. Hulke concluded by drawing attention to a form of splint which he used in these cases. It was applied to the other side, and allowed the joint operated on to be freely exposed.

Professor LISTER was much pleased to hear Mr. Hulke's remarks upon the use of chloride of zinc. Ever since Mr. de Morgan had drawn attention to it he had himself employed it, for it has the remarkable property of preventing putrefaction for two or more days in spite of the presence of septic elements. Wherever, then, putrefaction is already present this salt was of great benefit, and he was sure that he had seen cases which would have died had it not been used. He could understand Mr. Hulke's results since he used that combined with free drainage. He had never seen a case in which amputation of the hip was called for in preference to excision. Since seeing Professor Sayre illustrate his method at the Philadelphia Congress he had followed that plan, which involved only a limited incision, did not require the ligature of any vessel, and gave free access to the joint, whilst the subperiosteal section was of great advantage. The importance of a freely dependent opening was in favour of the posterior incision rather than the ingenious plan introduced by Mr. Parker. The last case he had operated on was in a young lady twenty-five years of age, the subject of hip-disease from early childhood. The limb was flexed, and riddled with profusely discharging sinuses. He excised after Sayre's method, broke through the anchylosis, and found the acetabulum to be perforated. All the diseased bone being cleared away, chloride of zinc was applied, and now three weeks after, there was far less discharge than at any time before the operation. That was an instance of excision in private practice, and it would have been wrong to have refused the patient the benefit of it. He could not concur in the view taken by Mr. Holmes as to treatment of abscesses in the hip, where the skin is unbroken. When assured that the abscess communicates with the joint we are bound to open that abscess, using such measures as we can to prevent putrefaction. At this point of surgical history it was not enough to treat such abscesses by "free incisions and washing out." To his mind it would be monstrous and horrible to open such abscesses without antiseptic precautions. He could never forget the feeling he experienced in the first case he so dealt with from a knowledge that the results would be different from those with which hitherto all had been so familiar. He would mention three cases he had had at King's College Hospital of abscesses connected with the hip in adults. If treated by simple incision, frequent washing out, and free drainage, the result might have been different from what it was. One was a young woman in whom the inflammation was attributable to sleeping in a damp bed; the second was a man in whom it had followed acute rheumatism; and the third was in an old woman, also rheumatic in origin. In each case the abscess was opened and treated antiseptically; no fever followed, and no shortening of the limb. No one could imagine the satisfaction at such issues; for had these

cases been treated in the ordinary way, probably all three patients would have died.

In strumous cases—where shortening exists, with or without perceptible grating—he should open the abscesses antiseptically, and often more useful limbs are thus preserved than by excision; and even in advanced cases, for it was surprising what may be done by repair. In one case he had at Edinburgh, treated on this plan, he removed much carious substance, and the case went on so well that he thought it would not come to excision. No pus was formed, and the patient was almost well, only a small sinus oozing serum remaining when the antiseptic dressings were given up. Suppuration followed, and excision had to be resorted to. He therefore urged strongly that if they wished to do full justice to their patients they ought to use antiseptic measures when the skin was unbroken. There should be no difference in their practice of hospital patients and private cases. If hospital cases were to be deprived of all the benefits they could bring to them, then hospital accommodation was shamefully and disgracefully inadequate.

Mr. MORRANT BAKER had performed excision of the hip in twenty-four cases at St. Bartholomew's and the Evelina Hospitals, two of which only had died from any cause attributable to the operation. There was no reason why this operation should be followed by exceptional mortality, when done with sufficient care. It was unnecessary to push the head of the bone out of the wound before sawing it off; there was comparatively no shock, and he did not think the risks greater than those in the removal of a sequestrum from the tibia. His practice was always to cut through the neck of the femur and leave the trochanter. It was not necessary to remove all the diseased bone; were this done, the whole shaft might sometimes require removal. Removal of the trochanter left a weaker limb. A perfect result was not always obtainable. Many of the subjects of morbus coxæ were tuberculous or the victims of amyloid disease, and all the operation could do was to improve the condition and prolong life. He concurred with Messrs. Holmes and Hulke that very much depended on the selection of fit cases; and no definite signs or general rules could be laid down for this. They must depend on their individual judgment and experience, and, unless this was done, cases might be operated on early which would have got well if left alone. In his experience it was not rare to find the head of the bone, detached as a sequestrum, loose in the acetabular cavity; in eleven out of twenty-four instances this had been the case, and that was a strong reason for performing excision in such cases; for were it not done the dead bone would become locked up in the cavity and be a constant source of irritation. He had brought one of his cases—a boy—in whom the head of the bone was thus detached, and in this case he also removed a part of the acetabular margin, which was also quite loose. Amyloid disease was not, in every case, a bar to operation. A lad of fourteen, in St. Bartholomew's Hospital last year, gradually developed amyloid disease; his liver enlarged and albuminuria appeared. Excision was performed, and from that time the signs of amyloid disease had steadily diminished. Had not excision been practised he doubted if the boy would now be alive. Of course if it were proved that cases did as well without interference he would cease to excise. But knowing as he did how many of these cases, if not interfered with, went on from bad to worse, how amyloid disease developed, and it was obvious that death would be the only termination—he could not hesitate performing an operation which was frequently merely a matter of the removal of dead bone. They were much indebted to Mr. Croft for raising the question, and he believed that the result would be an earlier resort to excision than now prevailed.

Mr. J. WOOD had performed excision of the hip in all classes of cases, some where there were no open abscesses, some where amyloid disease was present;

and he had come to the conclusion that the operation was one which had been abused. For there were cases which could be treated by extension, etc., and such should not be operated on. The tendency of modern surgery seemed to be rather meddlesome. He believed that if cases were seen early enough and treated scientifically there would be less need for excision. It was significant how rarely excision was necessary in the upper and middle classes, showing that neglect of treatment by rest among the poorer classes was a prime reason for the cases becoming so severe as to demand excision. Excision of the hip was not a formidable operation, and he had frequently witnessed the remarkable fall in temperature and improvement that followed its performance. His method was similar to that mentioned by Mr. Baker; and in children he dissected off the cap of cartilage from the trochanter. Attention to drainage was of prime importance. In one case, where a large unopened abscess extended half way down the thigh, and in a very emaciated subject, he had opened the abscess (not antiseptically), injected chloride of zinc, and practised free drainage. When the abscess cavity had contracted, he performed an exploratory operation (the case was one where the acetabular cavity had travelled upwards), and, finding the head of the bone to be bare, he excised this, as well as a portion of necrosed acetabulum. He had removed considerable portions of pelvic bones with security. As to the time for operative interference, he agreed with Mr. Baker that no one symptom alone should be relied on. But when, on exploration, dead bone is felt, this should be removed. This could generally be done by opening up the sinus in the interior of the thigh, and reaching the joint beneath the tensor vaginæ muscles, and detaching the muscles attached to the trochanter. He agreed as to the impropriety of forcibly pushing the head of the bone through the wound. By the use of a special saw the neck could be divided above the small trochanter, and removal effected after having previously dissected off the periosteum from the great trochanter of an adult, or detaching the cartilage of a child. He would operate in these cases, but not in those where nature was sufficient to effect a cure. He perfectly agreed with Mr. Lister as to giving poor and rich alike all the advantages derived from improved skill, and, although his practice had been successful, yet if an iota of advantage were to be gained by using Listerian precautions, he would always adopt them.

Mr. MacCarmac pointed out that the subject involved the two questions—(1) as a saving of life, (2) as preserving a useful limb. The mortality in Mr. Croft's cases was not large, seeing the condition and stage at which some of the patients were operated on. He had himself had eighteen cases, with two deaths; and doubtless had he traced their subsequent history as diligently as Mr. Croft had done, he would have found that many had died at later periods. The fact that many of these cases began in inflammation, leading to necrosis, was a strong reason for early operation. Further, there was good reason to believe that a large proportion were of tubercular nature. Koenig, of Göttingen, found tubercular disease of the bone to exist in sixty-seven out of seventy-one cases, and that was a strong point in favour of the early removal of the primary focus. The mortality after excision of the knee used to be very high, but now, since the operation was performed in less advanced cases, the results were far more satisfactory. Without wishing to lay too little stress upon reasons for delay, he yet held that in many cases excision should be done early if good success was to be had.

Mr. Howse congratulated Mr. Baker on his profession of faith in the value of excision of the hip. It was of the more consequence, because it came from a surgeon who had, not very long ago, entertained different opinions, and who was not easily convinced. As his colleague at the Evelina Hospital for Sick Children, he had seen nearly all the cases operated on, and he could assure the meeting

there was not one in which the operation had been performed in an early stage of the disease, or for other than the most grave forms of the affection. If then such results were obtainable by operating upon the worst cases, what might be expected when the affection was operated upon in an earlier stage? For his own part, he believed excision of the hip one of the best abused operations of surgery. It was so because it was looked upon as a *dernier ressort* in hip disease, and hence was made use of at a stage of the affection, often when lardaceous or miliary tuberculosis was impending, when it could be of very little use in saving the patient. In his own experience (and he had performed a very large number of these operations) excision of the hip-joint was an operation involving very little danger to the patient. The bleeding was small, and when performed antiseptically the shock was slight, and the general constitutional disturbance very little. He believed, therefore, the operation might with advantage be used at a very much earlier stage than at present. Whatever might be thought of the advisability of excisions when the joint cavity was simply distended with pus, before the stage of cartilage destruction, he himself entertained no doubt of the benefit to be obtained from this operation when grating was perceptible in the articulation. And he did so on account of the difficulties in such cases of diagnosis of the exact pathological state of the bone. It was true, as Mr. Holmes said, that some of the cases where grating was perceptible did well with simple incisions, rest, and extension, but it was only a small percentage of such cases. If the bone was healthy the case might do well by such treatment, but the comparatively small proportion of cases in which the bone remained healthy was shown in Mr. Baker's patients by the number of times in which he removed sequestra from the joint. Granted, then, a case of grating hip-joint, it was next to impossible by physical signs to determine, short of excision, whether the bone was in a healthy state or not. And as the removal of the head of the bone added very little, if any, to the risks of the operation, he preferred to complete it in this way. Indeed, he would be prepared to go much further than this, and say that excision was justifiable before the stage of grating was reached, when, in fact, the joint was distended with pus, and showed progressive signs of getting worse after treatment by rest and medicinal means. With a patient lying in bed and emaciating from pain and hectic, excision was often the only successful means of arresting the disease.

As regards the method of operation, he preferred to remove the trochanter major. He regarded free drainage after the operation as of primary importance, and the presence of the trochanter impeded this. If the trochanter were not cut away the muscular attachments to it were also generally not severed, and these muscles, contracting after the operation, drew up the limb and caused the trochanter to act as a kind of shield over the cavity of the acetabulum. If, subsequently, there were any sequestra to come away from the bone, they tended to be retained longer in this way than they would be if the trochanter were removed. As far as the treatment of carious acetabulum was concerned, he did not believe in the value of gouging it away. The bone was often so softened in such cases, and it was so difficult to determine at the time of the operation what bone was recoverable and what not, that gouging might be carried much too far, and then the pelvic fascia opened up, with considerable risk subsequently of pelvic abscess. His own rule of late had been, that if a sequestrum had existed loose to remove it, but otherwise to leave the acetabulum alone. He believed that better results would be obtained in this way than by too much meddling with it.

Mr. CROFT, in reply, said that Mr. Holmes's statement that a limb after natural cure was superior to a limb after excision, appeared a formidable fact; but that

should not weigh in deciding as to intervention. Mr. Holmes confessed his inability to give any indications of the cases where there was no necrosis and those in which there was necrosis, the crucial point in the matter. Where there was tubercular disease, as Mr. MacCormac pointed out, it was most important to extirpate the focus of possible inoculation. The specimens on the table would show that in not one of his cases was the operation uncalled for, and until any indications better than those he had followed could be furnished he would not yield his point. He had given his facts, and was prepared to stand by them. No such indications had been given by those who had spoken. The case of the child criticized by Mr. Hulke was one of acute necrosis, and no surgeon would refrain from interference in such a case when the head of the bone was already dislocated and the child was intensely suffering. He had adopted Sayre's method, using a longitudinal incision in the majority; a small number he had done by a Y-shaped incision, and he preserved the great trochanter or its periosteum, in order that firmer union might result, avoiding division of muscles from the trochanter. He doubted, after all, whether much difference of opinion really existed on the question; but he adhered to his opinion that the presence of pus in the joint pointed to advancing disorganization, and that in all such cases the surgeon should incise antiseptically, and if, on exploring, necrosis be found, he should then excise the head without delay.—*Lancet*, Dec. 27, 1879.

Midwifery and Gynæcology.

Double Uterus with Double Conception.

Dr. M. A. CACHOT reports (*Pacific Med. and Surg. Journ.*, Jan. 1880) the case of a lady, now aged 35 years, who was under his care formerly for eight years. He first treated her for typhoid fever, in St. Mary's Hospital, and afterwards for irregular and painful menstruation. After the use of a great variety of therapeutic means, her health was much improved. But the menstrual flow never could be regulated. It invariably appeared twice a month, a few days intervening between the two periods. The former of the two periods was very painful, the succeeding one perfectly painless. This was prior to her marriage. After her marriage she left the city, and when he next saw her, it was on account of her returning to the city to be confined.

In due time labour set in with great violence, and was very tedious, lasting twenty-three hours. The os uteri continued for a long time very hard and rigid, and the uterus appeared abnormal in form, as if containing an intra-mural tumour of the size of a large egg Labour terminated favourably with the birth of a living child, which weighed seven and three-quarter pounds. Spontaneous expulsion of the placenta followed, it being of the normal size. Two hours after delivery, hemorrhage came on, but was controlled by ergot and ice. The patient now improved rapidly, but three days afterward there was some return of hemorrhage, with pains simulating labour. On vaginal examination, Dr. Cachot found the uterus perfectly contracted, and no blood flowing from it. On searching for the source of the blood, he found on the left side of the uterus, immediately under the supposed tumour, another os dilated to the size of a half-dollar, and a fœtus presenting, which was extracted without difficulty. According to its appearance, it was about three months old, and very much decomposed, its death having taken place during the former labour, or some time before. After the removal of the

fœtus, hemorrhage ceased immediately, and recovery was very rapid, the patient being up in twelve days.

In the sixth month following, menstruation returned, and she has since given birth to another child, without difficulty, and without the aid of a physician.

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A Case of Spontaneous Version.

M. TÉDENAT records (*Lyon Médical*, Dec. 7, 1879) the case of a primapara in whom pains began in the evening; next morning at 2 A.M. membranes ruptured; at 8 P.M. she was admitted into the maternity, examined, and the shoulder found to be presenting, the back anterior and the head in the right iliac fossa; the os being as big as a florin. She was examined also by the chief surgeon of the maternity, and preparations made for turning. While things were being got ready, a sustained powerful uterine contraction affected the left half of the uterus, the right remaining flaccid; the head therefore could be easily made out through the abdominal parietes, and felt to be slightly raised. Then followed another similar contraction, but passing more to the right; with this the upward movement of the head was more pronounced, and the vaginal finger, instead of touching the shoulder, came upon the axilla. After six or seven more contractions, the transverse presentation was changed into one of the breech, in the left oblique diameter, dorso-anterior. An hour after, the labour spontaneously terminated in the birth of a living child. It was noticed that most of the uterine contractions began at the left and passed to the right side of the uterus. The placenta was retained, and on examination found to be encysted in the right horn of the uterus, which was incompletely bicorned, a median spur forming a projection from the fundus of five centimetres in height, and prolonged as a distinct raphé along the posterior wall. Commenting on the case, M. Tédenat points out that spontaneous changes of the presentation during the last few weeks of gestation are not infrequent. Schröder found such changes in six out of 214 cases, and the author in five out of sixty. The size of the child, the length of the cord, the dimensions of the pelvis, and the quantity of liquor amnii he thinks probably the factors which determine the occurrence of such mutations. He finds that most authors attribute to partial contraction of the uterus a large *röle* in the production of these alterations. In his own case, the right and left parts of the uterus acted as would have done the hands of an accoucheur performing external version. He agrees with Pollaillon in thinking that a bicorned condition of the uterus predisposes to transverse presentations, the septum preventing the long axis of the fœtus from corresponding to that of the uterus.—*Obstetrical Journal of Great Britain*, Jan. 15, 1880.

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Hot Water for the Induction of Premature Labour.

Dr. BENICKER related at the Berlin Obstetrical Society (*Berlin Klin. Woch.*, Dec. 29) a case of dropsy of the amnion, showing the advantage of inducing premature labour by irrigating the vagina with water at a temperature of 40° R. (122° Fahr.), to which some carbolic acid had been added. Two injections in the evening brought on pains which increased during the night, and after two other injections in the morning the cervix became well dilated. Dr. Benicker recommends this procedure as an energetic means of exciting labour without injury to mother or child. Its effects will vary according to the degree of excitability of the uterine fibres in different women. Mr. Möricke related a case in which he had in vain attempted to induce premature labour by injecting first pilocarpin, and afterwards hot water, which was employed five times. He eventually succeeded by means of a bougie. Dr. Runge, who had already published a successful case, cited an-

other in which the injection failed. All trials that have been made show the harmlessness of the procedure for the child. Dr. Veit referred to a case in which excessive rigidity of the soft parts was overcome by the injections. Dr. Wegscheider stated that many years since hot-water injections were employed in Berlin, but were given up on account of the bad effects they were supposed to have on the child.—*Med. Times and Gazette*, Jan. 31, 1880.

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A Case of Sudden Death of the Mother at the End of Pregnancy, with Post-mortem Section and a Living Child.

Dr. STORCH of Copenhagen records in the *Centralblat für Gynäkologie*, No. 25, 1879, the case of a patient who suffered for some time from albuminuria and œdema of the lower extremities, was 30 years old, a primipara, and had several years ago suffered from rheumatic fever. Her circumstances were comfortable. Towards the end of her pregnancy the patient complained of breathlessness and general disturbance, with much restlessness. The only indication of cardiac disease was a weak systolic murmur audible over the aortic valves; there was much hydramnios. The patient was suddenly seized with a fit of coughing and intense dyspnœa, during which she sprang out of bed, and seated herself in a chair in a condition of intense cyanosis. An attempt was made to give relief by venesection, but no blood would come. A few seconds afterwards she died. About 8–10 minutes after death Cæsarean section was performed, and a well-developed male child removed. The entire operation lasted about half a minute. The child was pale and relaxed. Dr. Storch, however, perceived a feeble and slow pulsation in the cord, about 70 beats in the minute. The cord was speedily tied, and persistent efforts at resuscitation continued for an hour and a half, the methods employed being the rhythmical blowing of air into the chest through a silver catheter, alternating with Schulze's method of artificial respiration. These were followed by complete success, although a full half-hour passed before the child made its first, feeble spontaneous inspiration.—*Edinburgh Med. Journal*, Jan. 1880.

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Ovarian Pain during Pregnancy.

Dr. CHAIGNOT arrives, after the study of many cases, at the following conclusions. Abdominal palpation practised at the end of pregnancy may, in a certain number of women, produce a sudden and sometimes very sharp pain near the sides of the uterus. This pain, in addition to its being provoked, is always of short duration, and clearly localized. If the conditions of the examinations remain the same, the physician can always reproduce them at will. It only appears when a small movable tumour of ovoid form is pressed against the uterus. He believes with Budin that the above-named small tumour is nothing else but the ovary, which is painful when compressed. It appears to be necessary for the production of this pain that there must be a resisting surface behind the ovarian tumour, such as the dorsal surface of the fœtus, or the contracted uterus. The ovarian pain appears most frequently on the left. This is due to the inclination and twisting of the uterus, which turns its left border forwards and produces the frequency of occipito-iliac left anterior positions. The most frequent spot for the pain is near a line drawn from the anterior superior spine of the ilium to the umbilicus, generally a few centimetres above it, during the last month of gestation. The average distances are from 8 to 10 centimetres from the anterior superior iliac spine; from 17 to 19 centimetres from the umbilicus, and 6 centimetres behind the projection formed by the round ligament. His observations do not enable him to affirm the existence of spontaneous ovarian pain during

pregnancy. He believes it to be possible, but it is necessary that favourable conditions be present. After labour, it is possible in some cases to reproduce the ovarian pain. It is then beneath a line drawn from the anterior superior iliac spine to the umbilicus.—*London Med. Record*, Jan. 15, 1880.

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Utero-Inguinal Hernia: Extirpation of Uterus and Left Ovary.

G. LEOPOLD relates in the *Archiv für Gynäcologie*, vol. xiv., a case of which the following abstract is given in the *Centralblatt für die Med. Wissenschaften* for October 11th. The subject, a well-developed woman aged 28, had experienced menstrual molimina since the age of fourteen; there was no discharge of blood, but she had for several days severe pain in the left groin. In this situation, an irregular tumour of the size of a plum swelled up considerably at each catamenial period, and was again diminished in the intervals. As her general health was much impaired, and eight years of married life had remained unfruitful, Dr. Leopold was consulted. He found in the left external inguinal fossa a tumour as large as half a hen's egg; this he took to be an abnormally placed ovary, from the median pole of which a strong cord could be traced as far as the left labium majus. On the right side, behind the horizontal ramus of the os pubis, a small cylindrical body could be felt. The vagina was a small *cul-de-sac* 1.2 inch deep; nothing could be felt in it but the bladder and rectum. At the next menstrual period, the face was noted to be bloated and of a dark brown-red colour; there were also epistaxis, convulsions, and rigors; and the tumour in the inguinal canal enlarged. Dr. Leopold now removed the tumour. It was found to be the upper section of a small uterus, traces of which disappeared in the form of a scarcely perceptible cord. The ovary, the Fallopian tube, and the small uterus were removed; the pedicle was securely ligatured and returned; and the wound closed. The patient made a good recovery, and had no return of the menstrual molimen. In the removed uterus was a cavity as large as a pea, filled with mucus, and having a smooth mucous membrane and a delicate vascular network. Blood had apparently not been effused into the cavity. Dr. Leopold regards the case as one of imperfect development of the Müllerian ducts, the left one of which was drawn into the inguinal canal. The ovary that was removed showed signs of active formation of follicles; the uterine horn always swelled considerably; and nevertheless there was no discharge into the uterine cavity.—*British Med. Journal*, Jan. 3, 1880.

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The Pain in Pelvic Cancer, and its Relief by Morphia.

At a recent meeting of the Obstetrical Society of London, Mr. CHAMPNEYS read a paper on this subject. The larger part of his communication consisted of a clinical study of fifty cases in the wards of St. Bartholomew's Hospital, and was illustrated by fourteen tables, dealing with the ages of the patients, the first symptoms noticed, the seat of pain, its locality, the date of its commencement, its quality, amount of intensity, and the relation of pain to hemorrhage. The analysis showed some points of departure from what have been considered established facts; for instance, as many of the patients were from thirty to forty years of age as were from forty to fifty; and, again, pain rather than hemorrhage was the first symptom noticed. On these the author remarks that his cases were only fifty, and can therefore not overthrow Dr. West's larger number of 166, but suggests that as this part of the question cannot be founded on objective facts, but must depend on the patient's memory, which memory might be supposed to retain hemorrhage rather than pain, it may be supposed that pain, as a first symptom, may occur oftener than is usually imagined.

It was shown that cancer may be painless at almost every stage, but it was remarked that of the author's cases none were painless in which hemorrhage was absent. The seat of pain was carefully ascertained by making the patient lay her hand or finger on the spot. The localities were most various, the region of prevalence of uterine pains being seen, however, to be mainly bounded by the line of the sacrum above and of the knee below. It is remarkable that the pains were six times as common on the left as on the right side, which cannot depend on the locality of the disease, but must depend on the difference with regard to sensation between the two halves of the body, a difference seen also in the common left-sided pain of females and the preponderance of left-sided hemi-anæsthesia; "Man is not an absolutely bilaterally symmetrical animal." Aching of the whole front of the thighs and pain transfixing the body are believed by the author to be at least uncommon except in cancer. Backache amounted to 24 per cent., pain in lower abdomen to 14 per cent., pain in the groins to 18 per cent., of all pains.

It was shown that no relation existed between intensity of pain and duration of disease. Thirty cases showed the pain to be worse post-meridian than ante-meridian. The author suggested a connection between pain worse at night and pain relieved by bleeding as possibly depending on the increase or diminution of vascular tension in the diseased tissues, which is illustrated by the nocturnal tightening of bandages, and he remarked that in all his painless cases there was bleeding. Three remarkable cases are given at length of nervous affection, in one of which there was paroxysmal nocturnal motor and vaso-motor disturbance of one, then of both legs, depending probably on irritation reflected at the spinal cord. Of the methods of administering morphia, the hypodermic injection was shown to be by far the most, and the suppository the least, effectual.—*Lancet*, Jan. 24, 1880.

Medical Jurisprudence and Toxicology.

Poisoning by Aniline.

M. Leloir recently made a communication to the Paris *Société de Biologie* on the phenomena of poisoning which had supervened in patients affected with psoriasis, to a limited portion of whose skin bandages saturated with a solution containing chlorhydrate of aniline had been applied. These patients had nausea, algidity, cyanosis, cramps, dyspnœa, and sleepiness; the urine contained fuchsine. M. Leloir had studied aniline poisoning experimentally. The phenomena observed in dogs, into the veins of which thirty grains of aniline were injected, were perfectly analogous to those found in man. The urine was scanty, and contained fuchsine; the saliva, on the contrary, was rather abundant, but did not contain either fuchsine or aniline; the blood was of a brownish tint, the corpuscles under microscopic examination appeared healthy. Nevertheless, blood-lesions seemed to be the cause of the symptoms noted. In several cases, there were epileptiform convulsions, which were not present in cases where the animal was killed by a series of weak injections; death then supervened by cold. M. Quinquaud has made experiments on the same subject, and has also noted, besides the appearances observed by M. Leloir, a diminution of hæmaglobin, and a remarkable incapacity of the undestroyed hæmaglobin to absorb oxygen. M. Laborde reminded the Society that the workmen in aniline works are subject to epileptiform convulsions.—*British Med. Journal*, Jan. 31, 1880.

MEDICAL NEWS.

A LEAVE-TAKING.

With this number my direct relations cease with the readers of the periodicals which have so long borne my imprint and that of my predecessors. It would be futile to assert that I can without regret look upon the sundering of a personal connection which has existed now for thirty-seven years; but that regret is lightened by the fact that I relinquish the business management of the "Journal" and the "News" at a time when they are enjoying to the utmost the favour of the profession, and that in introducing as my successors the firm of Henry C. Lea's Son & Co., I feel that the responsibilities which I am putting off devolve upon those fully equal to them.

In a country so young as this, it does not often come to pass that a business house passes through an unbroken line of descent to the fourth generation. Yet such is the case with the one, founded well-nigh a century ago by Mathew Carey, in which I have so long formed a part, and which I hand down, I trust, with its honourable traditions of usefulness and fair dealing unimpaired. For the new firm I can ask nothing more than a continuance of the very cordial relations which have during this long period been maintained between their predecessors and the profession.

Henry C. Lea.

March 1, 1880.

The Library of the New York Academy of Medicine.—We are happy to learn that the negotiations which have been for some time pending for the fusion of the libraries of the New York Academy of Medicine and the New York Journal Association have been at last successfully brought to a close by the Journal Association being merged into the Academy. The library of the Academy now numbers ten thousand volumes, and three thousand have been received from the Journal Association, and it is stated that another library of one thousand volumes will be soon added, and that the Library Committee expects that, before the close of this year, the total number of volumes will reach twenty thousand. It is the intention of the Academy to keep the library open in the evening and to establish a circulating department for medical journals on the plan heretofore practised by the Journal Association.

The existence of small medical libraries scattered here and there over a large city is a great misfortune to those who use them. The pride felt by the members of each society in its possessing a library is vastly more than counterbalanced by

the great inconvenience which results to them from the uncertainty where to find any particular book which happens to be needed, or from having to consult several libraries widely distant, with the consequent loss of time, in the prosecution of a study upon any particular subject. A medical society's library exists for the benefit of the whole profession in its locality and should be so conducted; and it is much wiser for the individual members of the profession, rather than waste their money in the administration of, and in necessarily duplicating books for, several small libraries, to economize their resources and unite their means in building up one principal library to which they can resort with the knowledge that whatever wealth of literature exists among them is there to be found.

It is for these reasons that we think the Academy of Medicine and the profession of New York are to be congratulated on the absorption of the library of the Journal Association, and we are sure that the first to recognize the wisdom of this step will be the members of the Journal Association itself.

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Wickersheimer's Preservative Fluid.—The *Berliner Klin. Wochenschrift*, No. 44, 1879, publishes an official memorandum by the German Minister of Education, etc., with reference to a new preparation for preserving dead bodies, animals, or plants, which has been invented by Herr Wickersheimer, of the University Museum at Berlin. The formula had been patented, but by arrangement with the Government the patent has been annulled within the limits of the German Empire. The composition of the fluid is as follows: Alum 100 grammes, common salt 25 gr., saltpetre 12 gr., potash 60 gr., and arsenious acid 10 gr., are to be dissolved in 3000 gr. boiling water. On cooling, the liquid is to be filtered. To every two and a half litres, supposing a large quantity to be prepared at once, a litre of glycerine and 250 ccm. of methylic alcohol are to be added. Herr Wickersheimer states that the bodies of animals or men preserved with this fluid retain their form, colour, and pliability completely. After several years the muscles look as fresh on section as if they belonged to a recent corpse. For embalming purposes the body is first injected with the fluid, in the proportion of one litre and a half for a child of two years, and of five litres for an adult. It then is immersed in a bath of the fluid for several days, after which it is rubbed dry, swathed in bandages wetted with the fluid, and preserved in an air-tight case. For bodies which are to be dissected, the injection alone suffices. Small vertebrates and invertebrates can be kept simply immersed in the fluid, or if wanted in the dry state may be in it six to twelve days, and then be taken out and dried in the open air. Hollow organs, such as the lungs and intestinal tract, are best injected with it before immersion. The process seems to have the recommendation of simplicity and cheapness, as well as that of its preserving the natural colour and the pliability of the objects treated by it. It is certain that its merits must have been well tested before receiving the *imprimatur* of the German Government.—*Med. Times and Gazette*, Dec. 6, 1879.

At a recent meeting of the Academy of Natural Sciences of Philadelphia, Dr. Leidy stated that this liquid was almost identically the same as that which had been used at the University of Pennsylvania for years, by the late Dr. Horner and himself, and it was simply a modification of the fluid used in the West for the preservation of hams, arsenious acid being substituted for the starch of that mixture.

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Massachusetts State Board of Health.—Dr. Henry I. Bowditch has tendered to the Governor his resignation as a member of the amalgamated Board of Health, Lunacy, and Charity, owing to the trebling of his duties, and the impossibility of his attending to them without serious injury to his private business. Dr. Bow-

ditch has been Chairman of the State Board of Health since its organization in 1869, and his resignation is a serious loss to the sanitary interests of the State, which will be felt far beyond its own confines.

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Medical Society of the State of New York.—The seventy-fourth annual meeting of this Society was held at Albany on the 3d, 4th, and 5th of February, under the Presidency of Dr. Henry D. Didama, of Syracuse. The attendance of delegates was large, and many very interesting papers were read.

The following officers were elected to serve for the ensuing year: President, Wm. H. Bailey, M.D., of Albany; Vice-President, Dr. A. Jacobi, of New York; Secretary, Dr. Wm. Manlius Smith, of Manlius; Treasurer, Dr. C. H. Porter, of Albany. The next meeting will be held at Albany on the first Tuesday in February, 1881.

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Iowa State Medical Society.—The twenty-eighth annual meeting of this Society was held at Des Moines, January 27th, 28th, and 29th. Dr. G. P. Hanawalt, of Des Moines, President, in the chair. The following officers were elected for the ensuing year: President, S. B. Chase, M.D., of Osage. Vice-Presidents, Drs. T. J. Caldwell, of Adel, and L. J. Alleman, of Boone. Secretary, Dr. J. T. Kennedy, of Des Moines. The next meeting will be held at Dubuque.

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The Abuse of Indiscriminate Medical Relief.

A conference between the Medical Charities of this city and the Philadelphia Society for Organizing Charity was held last month with a view to the development of a plan by which the abuse of the existing indiscriminate medical relief may be abated. Dr. H. Lenox Hodge, on behalf of the Committee of the Philadelphia Society for Organizing Charity, presented the following recommendations:—

First. That all applications for relief shall be made in the first instance at the offices of the Medical Charities.

Second. That applicants with families in receipt of $9 a week or more, unmarried persons receiving $6 or more, persons living out at service, are able to employ a physician, and should be refused treatment; and that applicants should be so advised through the cards of the Medical Charities, as well as by notices placed on the doors of the service rooms.

Third. That applicants who may be admitted to treatment shall be required to pay for their medicine, or to deposit ten cents at each visit in a box provided for the purpose, unless exempted through procurement of a certificate of the ward superintendent of the Society for Organizing Charity, on which the words "unable to pay" shall be noted. This condition should also be placed on the cards and on the notices on the doors of the service rooms.

Dr. Frederick R. Sturgis, of New York, by special invitation, detailed the workings of the fee system in the dispensaries of that city. This system was adopted in the New York Dispensary in 1876, and the income to the Dispensary from this source in that year was $852.44. The next year the machinery began to work smoother; 95 per cent. of the men, and 75 per cent. of the women, against 50 per cent. of them the previous year, were found able to pay the small sums demanded, and $3462.29 was received that year.

The meeting adopted the following resolutions:—

Resolved, That efforts should be made to prevent the pauperizing and enervating influences of undue and indiscriminate medical relief.

Resolved, That measures be taken to arrange the dispensary system so as to cover the whole city, in order to afford relief to the poor in every part at an office near to their homes, and to prevent overlapping in the treatment of cases.

Resolved, That a committee be appointed to carry into effect the plan which has been proposed to-night, or such modification of it as they and the several hospitals and dispensaries may deem advisable.

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Meetings of State Medical Societies.—The following State Medical Societies will hold their annual meetings next month:—

Tennessee State Medical Society, at Knoxville, April 6.
Mississippi State Medical Society, at Vicksburg, April 7.
Alabama State Medical Society, at Huntsville, April 13.
Medico-Chirurgical Faculty of Maryland, at Baltimore, April 13.
South Carolina State Medical Society, at Columbia, April 20.
Georgia State Medical Society, at Augusta, April 21.
California State Medical Society, at San Francisco, April 21.

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National Convention for Revising the United States Pharmacopœia.—The attention of "incorporated Sate Medical Societies, incorporated Medical Colleges, incorporated Colleges of Physicians and Surgeons, and incorporated Colleges of Pharmacy throughout the United States," is again invited to the importance of sending delegates to the National Convention for Revising the Pharmacopœia, which will meet in Washington on the 5th of May next. Each body is entitled to three delegates. It is requested that the names of delegates shall be forwarded to Dr. James E. Morgan, 905 E Street, N. W., Washington, D. C.

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Gift of a "Loving-Cup" to the New York Academy of Medicine.

Mrs. John Jacob Astor has presented to the New York Academy of Medicine a beautifully wrought "loving-cup," "as a messenger of a true sympathy in the purposes of the Society" and with the expressed hope that it "may procure a moment's pleasure to those whose days hold, necessarily, so large a measure of care and sacrifice." It is of solid silver lined with gold, about a foot high and six inches in diameter. Its surface is ornamented by the acacia, the symbol of friendship and love. On the front is the seal of the Academy, its motto, and the head of Hippocrates. Above is the name of the President, Dr. Fordyce Barker, and the date of his election, with spaces left for the names of his successors, while on its upper part, beneath the rim, is engraved the sentiment, "Peace and love be multiplied unto us."

Mrs. Astor, a few months ago, also presented to the Academy a check for two hundred dollars, to be expended in the purchase of books for its library. This liberality, so graciously bestowed, is but another evidence of this bountiful lady's intelligence, benevolence, and philanthropy.

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Public Honours to a Medical Victim.—The Paris municipality recently resolved that the names of the medical officers, students, or attendants, who died in consequence of the execution of their duty, should be inscribed on a tablet erected at the hospital at which the calamity occurred. M. Herbelin, an interne at the Sainte Eugénie, who has just died in the twenty-eighth year of his age, in consequence of diphtheria contracted in that hospital, makes the fifth victim during the last twelvemonth, three of the number having been internes. At the request of Dr. Lannelongue, whose *chef de service* he was, the President of the

Republic conferred on him prior to his death the Cross of Officer of the Legion of Honour, which seems to have given great satisfaction to the profession in Paris. His obsequies, too, assumed a quasi-public character in order to testify the sense entertained by the government, the municipal authorities, and the profession, of the self-sacrificing nature of the services rendered by the deceased and so many of his predecessors.—*Med. Times and Gaz.*, Jan. 17, 1880.

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Literary Notes.

It will, we doubt not, gratify our numerous friends and readers to learn that the consolidation of the *News and Abstract* has met with a most hearty response from all quarters. In view of the diagnosis which, since the demise of the British and Foreign Medico-Chirurgical Review, some of our weekly contemporaries have been in the habit of making, that the day of "quarterlies and monthlies" has passed, and that their own form of journalism will alone suit the future wants of this fast age, it may be not without interest to our subscribers to have the assurance that the AMERICAN JOURNAL OF THE MEDICAL SCIENCES finds its sphere of usefulness as wide as ever; that its subscription list was never in a more healthy condition than at present, and that, so far from its mission being ended, it has every prospect of a career in the future even more prosperous than in the past.

The last number of the *Revue Internationale des Sciences Biologiques* (Jan. 15), has for its leading article a translation of Dr. C. K. Mills's excellent review on "Cerebral Localization," which appeared in the AMERICAN JOURNAL OF THE MEDICAL SCIENCES for July, 1879. It may be justly held to be a high endorsement of the merit of Dr. Mills's treatment of the subject, that it should have been considered desirable to reproduce the review in the country where so much original work has been done to advance our knowledge in this special line of research.

Dr. George M. Beard has in press a work on "Nervous Exhaustion," to be published by William Wood & Co.

G. P. Putnam's Sons announce a "Student's Manual of Venereal Diseases," by Dr. Frederick R. Sturgis; a treatise on the "Throat and its Functions," by Dr. Louis Elsberg; and a work on the "Human Eye in its Normal and Pathological Conditions," by Dr. Adolph Alt.

Houghton, Osgood & Co. have in press a translation of a monograph on the "Utricular Glands of the Uterus," by Professor Ercolani, of Bologna.

Lindsay & Blakiston have just published the "Spectroscope in Medicine," by Dr. Chas. A. MacMunn, of Dublin, and a clinical lecture "On the Internal Use of Water for the Sick," by J. Forsyth Meigs, M.D.

Macmillan & Co. have also just published Mr. Brudenell Carter's new work on "Eyesight: Good and Bad," and H. K. Lewis a monograph on "Experimental Researches on the Regional Temperature of the Head," by Dr. J. S. Lombard, formerly of Harvard University.

Dr. Lionel Beale is engaged on a work on "Slight Ailments: their Nature and Treatment."

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Personal.—Professor Paul Broca has just been elected a life-senator by the French Senate.

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OBITUARY RECORD.—At his residence in Wiltshire, on the 1st of January, aged 70, HENRY HANCOCK, F.R.C.S., formerly President of the Royal College of Surgeons.

—— At Clevedon, on the 9th of January, aged 69, WILLIAM BUDD, M.D., F.R.C.S., formerly of Bristol. Dr. Budd contributed a number of valuable papers to medical literature, but he is best known by his able and exhaustive treatise on "Typhoid Fever, its Nature, Mode of Spreading, and Prevention," which was published in 1873, and at once established his reputation as an acute observer and logical thinker. So far back as the year 1839, when he was assisting his father during a severe epidemic of typhoid fever in North Tawton, Dr. Budd arrived at the conviction that the fever was communicated from person to person, and that the specific poison which is the cause of the fever breeds and multiplies in the living body of the infected person, as is the case in smallpox, scarlet fever, and some other diseases; and nowhere else. Continued observation led him to the conclusions that this specific poison is cast off from the intestines; and that the excreta from the intestines may communicate the fever to other persons in two ways—either by contaminating the drinking-water, or by infecting the air. Dr. Budd insisted that the ravages of typhoid fever might be immensely diminished, or even entirely prevented, by proper sanitary measures rigidly carried out—viz., by the *immediate* disinfection of all discharges from the bodies of persons suffering from the disease, of all articles of bed and body linen, and of closets and drains; and by the universal maintenance of good drainage and sewerage, and of a supply of water not exposed to contamination.

—— At Boston, on the 9th of January, of heart disease, J. WINTHROP TAYLOR, M.D., late Surgeon-General U. S. Navy.

Dr. Taylor was a native of New York, and entered the Navy as Assistant-Surgeon in 1838. He was made a Surgeon in 1852, and Medical Director in 1871. Since 1873 he has been attached to the Naval Rendezvous at Boston.

—— At his residence in this city, on the 11th of February, in the sixty-first year of his age, JOHN NEILL, M.D., late Professor of Clinical Surgery in the University of Pennsylvania.

Dr. Neill graduated at the University of Pennsylvania in the Arts, in 1837, and in Medicine in 1840. In 1845 he was appointed Demonstrator of Anatomy in the University; in 1847 he was elected Surgeon to Wills Hospital; in 1852, Surgeon to the Pennsylvania Hospital; and in 1855 Surgeon to the Philadelphia Hospital. In 1861 he was appointed Surgeon-in-Charge of the Military Hospital in this city, and organized the first eight general hospitals. In 1874 he was appointed Professor of Clinical Surgery in the University of Pennsylvania. He contributed a number of valuable articles to the *American Journal of the Medical Sciences*, and was also the author of "Short Descriptions of the Arteries, Nerves, Veins, and Lymphatics," with coloured plates; was joint author of Neill and Smith's Compendium, and was the American editor of Pirrie's Surgery.

—— At Notting-hill, on the 21st of January, aged 65, EDWARD CATOR SEATON, M.D., Medical Officer of the Local Government Board.

Dr. Seaton contributed the article on Vaccination to Reynolds's "System of Medicine," and in 1867 he wrote his well-known "Handbook of Vaccination," which is a complete and elaborate exposition of the subject of which it treats. He was an acknowledged authority on all matters relating to Vaccination.

—— At Balham, on the 25th of January, J. A. LOCKHART CLARKE, M.D., F.R.S., aged sixty-three years.

Dr. Clarke is everywhere known by his valuable investigations into the minute anatomy and pathology of the central nervous system. His researches on some of the affections of the spinal cord and medulla oblongata gained for him the great distinction of the Royal Medal of the Royal Society. He also discovered a new method of investigating nervous tissue which entirely revolutionized histological research.

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